

THE CHAUTAUQUAN.

A MONTHLY MAGAZINE DEVOTED TO THE PROMOTION OF TRUE CULTURE. ORGAN OF
THE CHAUTAUQUA LITERARY AND SCIENTIFIC CIRCLE.

VOL. V.

OCTOBER, 1884.

No. 1.

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REQUIRED READING FOR OCTOBER.

WHY WE SPEAK ENGLISH.

BY RICHARD GRANT WHITE.

Learning the reason of anything, by which we generally mean the cause of it, is a process the instructive benefit of which is not limited by the subject immediately under consideration. To trace the relation of cause and effect is a very great and very important part of true education; of which, it needs hardly here to be said, book-learning is only a help and adjunct. Indeed, this learning or finding of causes is an education or discipline which for those who give themselves to intellectual pursuits, continues all their lives. It is the chief occupation of philosophers, of men of science, of investigators, of all real students. Virgil—who was not a very great poet, being of the second, or even of the third rank, because of his moderate creative power, his lack of vividness of imagination and liveliness of fancy, but who is remarkable for a broad and serene thoughtfulness—said: "Happy is he who is able to discover the causes of things."* And indeed this process of finding causes is one of the most delightful and fascinating, and, to the soul of man, most profitable, in which man can engage. Of which the chief reason is the close and intimate relation that exists between all facts and thoughts and things. Isolation and independence are conditions hardly discoverable. Men can not be independent of each other, as we all find very early in life, if we observe and think. But yet, a man may isolate himself upon the top of a pillar; or he may build himself a hut in the woods, and give himself up to contemplation; thinking that in this way he will discover or evolve something that otherwise would be concealed. The discoveries and the evolutions in these cases, however, do not prove of much value, either to the individuals or to mankind. An isolated man, although monstrous, abnormal, unnatural, is possible, but not an isolated fact. An isolated fact is almost, if not quite, a contradiction in terms; for a fact implies conditions and causes from which it can not be separated. We shall thus find that the inquiry into the cause of such a simple, everyday fact as our speaking English will lead us through, although not over, the whole range of the history, known and conjectured, of that great family of the human race to which the

people of Europe and of civilized America belong. To follow the steps of this inquiry will not be difficult, and, I hope, not uninteresting to the least learned reader of this magazine.

Why, then, do we in the United States of America speak English? Because that language is the speech of the English, or the so-called, Anglo-Saxon people? Because our forefathers came from England? Partly so. These facts have certain relations with that into the causes of which we are inquiring, but they do not wholly account for it. For although we are, in the main, an English people, and the forefathers of most of us did come from England, there are now many, although comparatively few, of us who are of Irish or of German blood. Moreover, in Ireland there are millions of Irishmen, Celts, who hate "the Saxon" (that is the English), but who speak English, and whose forefathers have spoken it for many generations. Now, the first reason why those Irishmen speak, and so long have spoken English, is a very simple, bald and cogent one, and it is the very reason of our speaking that language. It is, necessity: nothing more. The Celtic Irishman whose race-tongue was Erse, spoke English for the very reason that we, whose race-tongue it is, speak it; because he must speak it to be understood; for no other reason. But how came this necessity about? How came English speech into Ireland or into America, or, for that matter, into England?

Language is a mere instrument of man's convenience; as much so as a spade or a knife, or any other tool. He uses it for the purpose of communicating with those by whom he is surrounded; and he must give to things and thoughts the names which they give them, or he might as well be dumb. If they call a certain animal a horse, it will not do for him to call it a *cheval*; and if they call it *un cheval*, it will not do for him to call it *ung shovel*, as many persons have found in France to their surprise and inconvenience. And if he is born and bred in France, no matter how thoroughly English or Irish he may be in blood, he will call it *un cheval*, without effort and without thought.

These are obvious facts; but for our present purpose they are not trite, nor is the consideration of them trifling. They have bearing upon the very common belief, or assumption,

* "Felix qui potuit rerum cognoscere causas," Georgicon II, 490.

that language is a product of race; that there is some mysterious and inevitable connection between man's physical and mental constitution and the language that he speaks. There is no such connection. Manner of speech and style of writing are peculiar in various peoples, as their manner and their style in other things and acts are peculiar. There is a French style of speaking, as there is an Italian, an Irish, and an English, which pertains to those various peoples, and which is a product of their national spirit, their genius, as we say. But there is no such influence of national spirit, or of physiological traits or conditions upon the substance of language—words. The Irish did not speak Erse, because Erse was a natural product of the Irish physical or mental constitution. So with the English; so with all peoples. An English, a German or a French boy, born and brought up in Russia, would speak Russian; and (personal peculiarities apart) they all would speak it alike, and without the least modification dependent upon their respective English, German, and French physical and mental constitution. If, however, their mothers were with them, and their mothers could speak no Russian, each of those boys would speak two languages, English and Russian, or German and Russian, or French and Russian, and, accidents apart, each of them would speak his two equally well, and with equal freedom. He would think with equal freedom in both.

Some of my readers must know, from their own observation, that this is true; and yet I do not doubt that even of these there are not a few who have never thought of it as evidence that, although certain languages are spoken by certain races, this is not because there is any natural and peculiar fitness of the words of any one language to the character or the spirit of any one people. The language used by any and every people has a historical origin; and the peculiar forms of its words are the product of time, of circumstance, and probably, in a certain very moderate measure, of climate, and of physiological conditions.

The sun and the moon received their names for good reasons; the former because it is the creator (light and heat being the causes of inorganic life), and the latter because it was the first measurer of time; and these names they have borne for at least four thousand years—we do not know how much longer. But now those words have become mere names; mere sounds which are the vocal indications of the objects to which they are applied, so that if by some wizardry we were all, with one exception, to wake up to-morrow calling the light which rules the day, moon, and that which rules the night, sun, we should be perfectly satisfied, and find in it no inconvenience; and moreover we should look upon him who used the words in the converse senses, that we had forgotten, as a madman.

Words however have, with very few exceptions, a real meaning, or at least a reason for their use, as *sun* and *moon* have. The words without such meaning may be all told upon the fingers. Two words of scientific origin, but very common use, are illustrative examples—*chloroform* and *gas*, both of which are of recent, the former of very recent, fabrication. *Chloroform* is so called because it is, or is supposed to be, a chloride of formyl, which is the base of formic acid, a fluid found in red ants; *formica* being the Latin for ant. It was desirable to have a convenient name for this substance, and the name was made by uniting the first syllable of *chloride*, or *chlorine*, with the first syllable of *formyl*; whence we have *chloro-form*. The name *gas* was invented, we know not why or wherefore, by a Dutch chemist, some two hundred and fifty years ago, for all those compressible, air-like fluids to which it is now applied. It was convenient and came first into scientific and then into general use, so that now it is one of the commonest words, even in a sarcastic, metaphorical sense, in the speech of all civilized peoples. Now nearly all words have a significant origin, like *chloroform*. Those which are without inherent significance, like *gas*, are very few indeed. Words like these, and like *oxygen* (which is only about one hundred and fifty

years old, and means acid-maker), are called coined words, because they were recently and deliberately made. The words which form the bulk of language are of very remote origin, and, until lately, of untraced growth.

The tracing of the growth of words which has been scientifically—that is, historically and logically—prosecuted for a little more than fifty years, has brought to light the important fact—a fact the discovery of which is second in importance only to that of the discovery of the law of gravitation—that all the languages of the civilized peoples of Europe and America, together with some in Asia, have a common origin. At one time there was no English, no French, no German, no Russian language, no Erse or Gaelic, no Latin, no Greek; but at that time the germ of all these languages, and of others which need not be mentioned, existed in a tongue which for more than four thousand years has been unspoken, but which from the people who spoke it has been called Aryan (pronounced *Ahrian*). This discovery was sure to have been made in one way or another; but the immediate cause of it was the presence in Hindostan of the British East India Company. In 1776, N. B. Halhed, a servant of that company, who had been an early friend of Sheridan, the orator and dramatist, published a Bengali grammar, in which he mentions as very remarkable, "the similitude of Sanskrit words with those of Persian and Arabic (?), and even of Latin and Greek; and these not in technical and metaphorical terms, which the mutation of refined arts and improved manners might have occasionally introduced, but in the main groundwork of the language, in monosyllables, in the names of numbers, and the appellations of such things as would be first discriminated on the first dawn of civilization." Soon afterward, in 1786, Sir William Jones, who had gone to Bengal as a judge, in a paper in "Asiatic Researches," expressed a like opinion more strongly and in more comprehensive terms. "The Sanskrit language," he says, "whatever may be its antiquity is of a wonderful structure, more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either, yet bearing to both of them a stronger affinity, both in the roots of verbs and in the forms of grammar* than could have been produced by accident, so strong that no philologist could examine all the three without believing them to have sprung from one common source, which perhaps no longer exists. There is a similar reason, though not quite so forcible, for supposing that both the Gothic and the Celtic, though blended with a different idiom, had the same origin with the Sanskrit. The old Persian may be added to the same family."

What Halhed and Jones put forth as strong probability was ere long found, was clearly proved, to be the truth. Persian, Greek, Latin, Gothic, Celtic, and of course all languages derived from them, were discovered to be identical in origin with Sanskrit. Now, what was this Sanskrit, this wonderful language which so suddenly and so surely unlocked the mystery of the world's speech, and revealed the source of all the languages of civilized Europe, and some of those of Asia? Sanskrit, (the name means worked-together, elaborated, highly finished,) is the sacred language of the Brahmans, in which was preserved the religious teachings and legends of the people of India, whom we call Hindoos. It is quite four thousand years old in its existing form. For a very long time it was unwritten, the Brahmans having no letters; and the sacred books (so we must call them) were transmitted orally, but with such veneration not only for their doctrine and their story, but their phraseology in its minutest particulars, that among the Brahmans grammar became a religion, and the slightest variation from the text of the Vedas—this was the name of the sacred books—was regarded as a sin. Punctilio in this respect was carried so far that when letters were borrowed from the West, and an al-

* The grammar, it is to be said, is far more like that of the Greek than like that of the Latin language.

phabet was formed, and the Vedas were written, it was protested against by the conservatives as a sacrilege. Common sense and convenience, however, carried the day. Sanskrit is the most elaborate, the most minutely divided, the most elaborately inflected speech known to man. The sight of a Sanskrit grammar is appalling to the common sense of our day. There are ten conjugations of verbs; and a verb has ten tenses; and each one of these tenses has three numbers, singular, dual and plural; and each tense has two sets of terminations. Nouns, adjectives and pronouns are singular, dual and plural, and have eight cases. Inflections of all words are distracting for multitude and intricacy. Yet this elaborately intricate language was spoken in what we think of as the wilds of Asia long before the history of the human race is known; at least four thousand years ago.

A Frenchman named de Chézy learned Sanskrit from a British officer named Hamilton, who, on his way from India, was detained in France, and taught it, as he says, to Franz Bopp, a German philologist, who made use of it in a work on the system of conjugation, and thus became, unintentionally, a Columbus-like discoverer of the great science of Comparative Philology. For Bopp "built better than he knew." His purpose was merely to work out his system of conjugation; but in doing this he revealed and established the unity of speech in all the Aryan or, Indo-European peoples. This he himself afterward elaborated in his "Comparative Grammar" of the chief Aryan languages. Then came another great German philologist, Jacob Grimm, who discovered the law, or method, according to which words changed their forms; and the great end was accomplished. This happened in 1816-19; and since that time Comparative Philology has worked upon the lines indicated by Bopp and Grimm. Bopp's great "Comparative Grammar," however, did not appear until 1833.

One of the most important, if not the most important of the results of the discovery of Sanskrit, and the consequent prosecution of the study of language upon the historical and comparative method—the only safe method for the study of any subject—is the revelation of the origin, and to a certain and very remarkable degree, of the early unrecorded history of the Aryan or Indo-European peoples; that race which has received the latter name because it occupies, and for two thousand years and more has occupied, all India and Europe. Let us glance at this history as it is thus revealed, for it is very much to our present purpose.

Take a good map of Asia, one which shows the eastern confines of Europe, and turn your attention to the country now called Jorkistan, lying between the Caspian Sea and the western boundary of the Chinese Empire. There, some five or six thousand years ago, (it will not do to be too particular, all the more because we can not, if we would,) about the foot of the Hindoo Kosh, and around the sources of the Oxus, there lived, we have good reason to believe, a people who called themselves Aryan. They were a white race; much fairer, at least, than the people who were then occupying Europe and the other parts of Asia. They were strong of body, intelligent and enterprising. They did not live only by hunting and herding, like the nomadic peoples, their neighbors, but cultivated the ground. Their name, Aryan, means honorable, noble; and there is some reason for believing that it is connected with their agricultural pursuits and distinction. For reasons which of course we do not know, but probably from the pressure of population, more than four thousand years ago this people began to send out bodies of emigrants. They moved westward, toward the Caspian Sea, of the existence of which they were probably ignorant. They had used boats upon the Oxus, but the history of their language shows that they knew nothing of what we call navigation. Their progress seems to have been slow, but continuous, one body of emigrants being ere long followed by another. We may be sure that

they had to fight their way. So late as eight hundred years ago all emigration was armed. The strong took the land red-handed from the weak, or at least from those who were not so strong and so numerous as they were themselves. The Aryans reached the Caspian Sea; and took possession of the country lying south of it, since known as Persia. After a time, we know not how long, emigration began again from this point. But here the advancing people divided. Some of them moved in a south-westerly direction; and this stream of emigration continued until it overflowed all the vast territory now known as Afghanistan, Belochistan and Hindostan. Another stream moved westward and northward, and passed through Turkey in Asia into Europe.

We have reason for believing that up to the time when this division took place in the country south of the Caspian Sea, the Aryan people spoke one language; but sufficient time had already elapsed for a considerable change to have taken place in the tongue which was spoken on the plains at the foot of the Hindoo Kosh. Language changes rapidly among people in a low state of civilization, without literature, without letters which are the landmarks and conservators of speech. But this point of time and of place is that of a great division in the speech of the Aryan people. Of the language of those who moved westward into Europe there are no remains which date within many centuries of this period; but of the language of those who moved south into Hindostan, we have in the existing Sanskrit a representative which is of almost indefinable antiquity, and the perfect preservation of which is marvelous. It is no rude, ruinous relic, but complete, elaborate, and finished to the highest point of perfection in its kind. It will be seen (and this must be constantly borne in mind) that Sanskrit is not the original Aryan language, but only the oldest existing offshoot from that language. The great, the inestimable value of the discovery of Sanskrit was not that we find in it the source of other languages, not that in it was the origin of the words spoken by the various peoples of Europe; but that it furnished evidence of the most important fact in the history of language, one of the most important facts in the history of the world. It had been assumed that the countless words which were similar in the language of the European peoples, and the many which were identical, were derived one from another; that they were adopted by one people from the language of another; that they were the product of neighborhood, of intercourse, of imitation, of convection—that is that they were carried from one country and people into another. The discovery and the study of Sanskrit proved that these words, or most of them, came into the various languages in which they are found, not by any or by all of these methods, but by direct descent from a speech which was at one time common to the forefathers of all the peoples in India, in Persia, and in Europe. Of these various languages Sanskrit is not only the oldest, but so very much the oldest that it carries us up very far toward the original speech of the Aryan or Indo-European race; so far that we are not without reasonable hope that philological science may elaborate by its help a proximate form of the elements of the original Aryan speech.

It is worthy of remark that the European language most like the Sanskrit, most like it in substance, and notably most like it in grammatical structure, is the Greek; the language of the people nearest Asia, nearest the point of the division of the Aryan people into two great streams of emigration.* And here, too, it may well be remarked that the book of Genesis, in one of those ethnological passages which reveal a knowledge of prehistoric man so perfectly in accordance with the results of modern historical inquiry and scientific investigation that it

* There is a language, the Lithuanian, spoken by a Leth-Slavonic people, north-west of the Baltic, near Poland, which has preserved in a remarkable and unique manner forms of the old Aryan speech which are extinct in other European tongues. But it is the language of a small, rude, unimportant people, without a literature, and indeed was not written until the sixteenth century. It is of great interest to the student of comparative philology, but of none to us at present.

would seem that they must have been a revelation from Omniscience, makes the confusion of tongues and the consequent dispersion of nations take place upon the plains of Shinar, in the very region, at least, where the Aryan dispersion began.

To resume our brief story of the Aryan advance to take possession of the world; for we are no longer concerned with what went on in India or the East. Many centuries had now elapsed, and the Aryan people had multiplied into many millions of men, and had formed themselves into nations or peoples ignorant of their common origin, and regarding each other as all peoples then regarded each other, as enemies, rivals in the possession of the earth and its products. The emigration continued; those in advance being driven and pushed on by those who followed. Europe once entered, there was again a division of the stream of advancing, conquering men. The dispersion was doubtless greater than before, but again there were two main bodies, one keeping to the south along the northern shores of the Mediterranean Sea, the other moving northward, toward the Baltic. The former has been designated from the principal peoples involved in it, or resulting from it, the Italo-Græco-Celtic strain; the latter is the Gothic. It is with this that we are chiefly, but by no means exclusively, concerned. We are Goths.

It has just been said that those who were in the advance in this great emigration were pushed on by those who followed. Who were the advance of this westward movement, the first Aryans who entered Europe? There is no reasonable doubt that they were the Celts, the people who, some thirteen hundred years ago, were in absolute and complete possession of the islands of Great Britain and Ireland, and a small part of the northwestern coast of what is now, but was not then, France. These people, this head of the Aryan column, passed through southern Europe, (we know it by the names they left behind them, given to places during their temporary, but not short occupation of the soil,) and coming to the ocean, went northward, then crossed the English channel, and took possession of Britain and Ireland. There they stopped simply because they could go no farther. But they were still pushed by those who followed. The invasion of Britain by the Romans, and yet more, the after invasion and occupation of it by the so-called Anglo-Saxons, our forefathers, were a mere continuation of the Aryan emigration which had begun at the foot of the Hindoo Kosh, in Asia, thousands of years before.

These Celts who went first were followed by the people who, in close connection with them as to time and affiliation of blood, became the Latin races (old Romans, Italians, Spaniards, French), and the Greeks. It was natural that the first stream of Aryan emigration into Europe should take its course through the countries of these peoples, because they lie at the south, on the borders of the Mediterranean Sea. Men never go northward to find homes amid snows and ice one half the year, if they can find land of more genial clime unoccupied or occupyable. The leading bodies of the Celts having reached the ocean in the southern part of Europe, and being pushed on by the steady flow from behind, moved northward, and as we have already seen, at last left the continent, and rested in Britain and Ireland. Here, from their insular position, they were able to maintain their footing firmly, if not undisturbed, for many centuries. They were not displaced in Britain until about thirteen centuries ago; and then they were not driven onward, as before they had been driven; for there was no place whither to drive them. They were, in the words of an old adage, perhaps as old as this very time, "between the devil and the deep sea;" and most of them were slain to make room for their fellow Aryans, their far-away kindred, whom they knew not, and had no reason to know, and whom they hated with good reason.

The Goths, of whose race we are, and from whom we directly come, moved northwestward from the western shores of the Black Sea, where they are first heard of. Their lan-

guage, in its original form, is lost like the great original Aryan tongue; but as in the case of that tongue, a very early offshoot of it has been happily preserved. This is the Mæso-Gothic, into which Ulphilas, a bishop of the Mæso-Goths, who had become Christians, translated the New Testament and part of the Old about one thousand five hundred years ago. Of the former a very considerable part remains. It is written in large silver letters, on parchment of a beautiful purple tint. This work shows us all of the structure and much of the substance of the Mæso-Gothic language; and in the former even more than in the latter affords, like the Greek, evidence of an origin identical with that of Sanskrit.

The Gothic people pushed, and were pushed, northward, and began, in their turn, to divide and to disperse, and soon to be unable to understand each other's speech, and to regard each other as foreigners and enemies. For it must be remembered that these migrations were slow, extending through centuries; that they consisted of alternate movement and settlement; settlement for many generations in one place; so that the mountains and streams and forests still retain evidences of this residence, in the names given to them by these tribes or sub-tribes of the Aryan people. It must be remembered, too, that in these remote times, at that early stage of civilization, when there were no books, except a few manuscripts on parchment, no strongly built towns, no stability of government, and when inter-communication was slow, difficult and dangerous, an interval of a hundred years was quite as long as one of five hundred of the years last passed, in its effect of separation and isolation of peoples, in its dividing families into tribes, and tribes into strange and hostile little nations.

From the Goths there was now a new offshoot, one destined to power and preëminence in the future of the human race. While the greater number of them remained in the country which for some eighteen centuries has been loosely called Germany, a large body of them moved northward and took possession of the countries now known as Denmark, Sweden and Norway, with the neighboring islands. These people are known ethnologically as the Scandinavians; and it is from them, and from some very near neighbors of theirs, also of Gothic race, who settled in the country in and about the lower part of Jutland (the old name of Denmark), that the English people, of whom we are a part, are descended.* It so happened that in the continuance of the westward movement of the Aryan people there was a union on the island of Great Britain, of emigrants from Denmark and the neighboring country on the continent, and from the western part of the great northern Scandinavian peninsula (Norway); and the result of that union, which was some eight centuries in forming, was the English people, by whom chiefly this country was settled only some two hundred and fifty years ago, and by whom its laws, its religion, its manners and customs and its language were determined and established. It is with the last of these language, that we are here concerned. What that language is, and how it became what it is, will be the subject of our next paper.

*The Scandinavians, and all the peoples who are loosely called German tribes, High-German, Low-German, and what-not, are generally regarded as branches of a great Aryan stem, which is called the Teutonic race; and some of my philological readers, should any such honor these unpretending papers with their attention, may be surprised, and even offended, at my omission of any mention of the great Teutonic family. As to this, my only defense, or rather my only excuse, is that I have been unable to convince myself of the existence of any such branch as the Teutonic, antecedent to the Gothic, of which the Mæso-Goths were an early offshoot. I can not see that the Teutones of the Roman historians represent an elder, dominant, or parent branch of the Aryan race of which the Goths were a younger and minor. As to the word German, and its use in "German tribes," "German dialects," every scholar knows that it is not an indigenous name, but that it was imposed from without, by strangers, upon the people who bear it, who call themselves Deutch; and that this name was in effect territorial, meaning all the people, of whatever race, who lived within or beyond certain boundaries. As to the identity of origin in *Deu-tsch* and *Teu-ton*, that seems to me to be by no means clearly made out. For Teutonic race I would substitute Gothic. The question from the present point of view is happily not of serious or intrinsic importance.

HOME STUDIES IN CHEMISTRY AND PHYSICS.

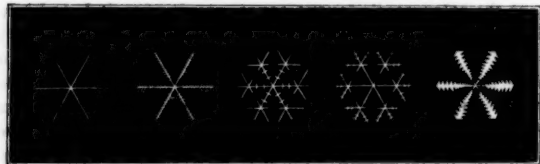
BY PROF. J. T. EDWARDS, D.D.

Director of the Chautauqua School of Experimental Science.

In our day science invades the kitchen. Knowledge knocks at the sitting room door. Literature and art visit the parlor of even our humble homes. To do anything in furtherance of popular education is a delight. Mine be the task of making the laboratory and the home better acquainted.

The limitations of an article for THE CHAUTAUQUAN cause the first embarrassment. One must at once become an eclectic, and select wisely the *best* from a wide field. The next difficulty is to give coherency and classification to the truths selected. Upon what golden cord shall we arrange the shining truths?

Let us use an ancient, though incorrect classification of elements: Water, air, earth, fire, adding another, organisms. Indeed, this is about the division of matter which the common people make to-day, although chemists tell us that neither of these is an element, and that the simple, indivisible substances in nature are sixty-six in number. As chemistry and physics are so closely related, we shall consider each of these topics from the standpoint of both these sciences. This will call for ten articles, on the following subjects: Chemistry of Water; Physics of Water; Chemistry of Air; Physics of Air; Chemistry of Fire; Physics of Fire; Chemistry of Earth; Physics of Earth; Chemistry of Organisms; Physics of Organisms.



FORMS OF WATER CRYSTALLIZED.

CHEMISTRY OF WATER. H_2O .

Do not be disturbed by these cabalistic symbols; they are simply the chemist's name for water; a most expressive name, too, as we shall presently discover. Some names are misnomers. Abel Blackman may be both weak and a white man. Our letters can not mislead. They abbreviate, show the class of each substance, the elements that form it, and their proportions. Berzelius devised this mode of naming. (Who was Berzelius?)

On the table stands a glass of water. How beautiful it is! Even diamonds, costliest of gems, are valued in proportion as they possess its marvelous clearness, those of the "first water" being most highly prized. We are now to speak of some of the *chemical* properties of water; hereafter we shall consider the physical characteristics.

DISTINCTION BETWEEN ATOMS AND MOLECULES.

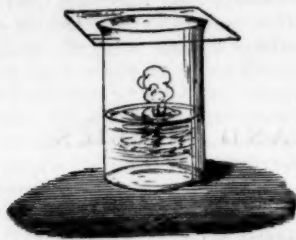
See! I have dipped my pencil into the goblet, and brought up a drop of water. What force binds together the pencil and the drop? What holds the drop to other drops? Why is not this ice instead of water? If I shake the pencil in what direction does the drop fall? If the drop were larger than the world, which way would the world go? What other force is there in it

which, according to Faraday, is equal to that in a flash of lightning? Here are, then, five great forces in a drop of water, yet none of them changes its nature. It is still H_2O .

Let us place this drop of water in the upright tube of an atomizer. Apply air. See, the drop has broken into thousands of particles. Now, suppose we could take one of these and place it in a flask. Apply heat, and we should separate the little particle into thousands of particles of steam, but each of these, and any lesser division of these, would still be H_2O . The minutest division of the water *possible* would be called a *molecule*, yet it would still be water, and composed of two parts of hydrogen and one of oxygen. The old ocean itself contains the same. The Cracow beds of salt are made of chlorine and sodium, and the minutest dust from one of its crystals would be found to contain the same elements, and in the same proportion, both by weight and measure. Molecules, then, combined, make only *masses* of the same nature. But molecules are composed of atoms, and whenever atoms of two or more different substances are combined they always form something different from either of these. The force that unites them is called chemical affinity, or sometimes the chemical force. For example, tenacious iron unites with a gas and forms a brittle, red substance, rust. Chlorine is a poisonous gas, and sodium will burn on water, both deadly; united they give us salt; absolutely essential to life. Hydrogen is the best substance in the world to burn, and oxygen the best supporter of combustion. When united they form water, which is universally employed to extinguish fire. Blue vitriol is blue, as the name implies, yet it is composed of four elements, two of which, H and O, are colorless, copper, which is red, and sulphur, which is yellow. Sulphur has little or no odor, and hydrogen has none, but when united they form a gas which has the odor of spoiled eggs. White sugar is nothing but black charcoal and water. It will thus be seen that here is a source of *new* things in nature. Whatever chemical affinity touches is changed.

And so we have found another force in our drop of water taken from the goblet, more wonderful than any yet named, a mighty, transforming energy which has but one worthy rival in the work of creating new things, the vital principle, and even that must yield at last to this all conquering power. If our goblet was large, and held a pound of water, (about a pint,) we should find that to pull the molecules apart, that is, make it into steam, would require a force which would raise four tons to the height of one hundred feet. But more wonderful still, to separate the pound of water into two chemical constituents would require, according to Prof. Cooke, an energy which would raise 5,314,200 pounds one foot. Our pint of water would then occupy 1800 times its present volume.

Let us now give a striking and beautiful illustration of chemical affinity. We will throw into this tumbler a piece of potassium (symbol K) half as large as a pea. This interesting metal was discovered by Davy in 1807. Its affinity for O is very great. As soon as it falls upon the water it abstracts oxygen and forms potassium oxide (potash), while the hydrogen and a small amount of volatilized K escape and are burned with a brilliant violet flame, on account of the heat evolved by the energetic chemical action.



POTASSIUM BURNING BY COMBINING WITH THE OXYGEN OF WATER.

IMPORTANT DATES.

The composition of water was discovered about one hundred years ago. Cavendish found hydrogen in 1776, and Priestly discovered oxygen in 1774, August 1st, a date which some one says "may almost be accepted as the birthday of modern chemistry."

Is it not remarkable that four of the brightest "red letter days" in the history of this science should be embraced within two decades, from 1754 to 1774? In 1754 Joseph Black discovered carbonic acid gas; in 1766 Dr. Cavendish found hydrogen; in 1772 Dr. Rutherford discovered nitrogen, and in 1774 Dr. Priestly found the King of the Elements, oxygen. Until then mankind were ignorant of the existence of a substance which composes in the aggregate one half the earth.

ANALYSIS OF WATER.

Returning to our glass, let us suppose that the bottom has been so perforated that two little strips of platinum wire can be inserted side by side, at the distance of half an inch from each other, and so as to leave the tumbler water-tight. Now attach the lower ends of these wires to wires connected with the poles of an ordinary galvanic battery. Small bubbles will be seen to rise immediately around the wires in the water. Fill two glass tubes (closed at one end) with water, and having placed a little piece of paper over the top, hold the finger on the paper, and quickly invert the tubes over the wires. The escaping gases will thus be secured. The electric current is counteracting the affinity of the two elements that form water, and they are collecting in the tubes. You will soon find that the H gathers more rapidly than the O, and upon measuring them there will be twice as much of the former as of the latter. Weigh them, and the O outweighs the former eight times. If, then, one atom of O weighs eight times as much as two atoms of H (H_2O is the symbol for water, remember,), then one atom of O weighs sixteen times as much as one atom of H; or, in other words, H is sixteen times lighter than O, and is the lightest substance known.

Place the O and H in a eudiometer over mercury, and send an electric spark through them; the gases will disappear, with a loud explosion, and there, resting on the quicksilver, will be seen the original drops of water which we decomposed. We have now shown the composition of water, both by analysis and synthesis.

HYDROGEN.

An atom of H is the chemist's unit. This is a colorless, odorless, tasteless gas, fourteen times lighter than air. When burned it produces a more intense heat than any other substance. Iron burns in its flame like paper. When united with O, and a piece of lime is inserted in the flame, the latter becomes exceedingly brilliant, forming the Drummond light, which has been seen at the distance of one hundred miles in the day time. So diffusive is H that if a sheet of paper or gold-leaf be placed over an escaping jet of the gas, it will pass directly through the paper, and may be lighted on the upper side. H is easily prepared, and many interesting experiments may be performed with it, some of which it may be well to mention. Take up on a pointed wire or needle or with tweezers, a piece of the metal sodium, quickly insert it under a tube filled with water and invert in a

glass of water; the sodium will at once take the O and leave the H to displace the water in the tube. Remove the tube, still holding it with opening downward; apply lighted match and a slight explosion will follow. What two properties of H have you shown by your experiment?



COLLECTING HYDROGEN EVOLVED FROM WATER BY SODIUM.

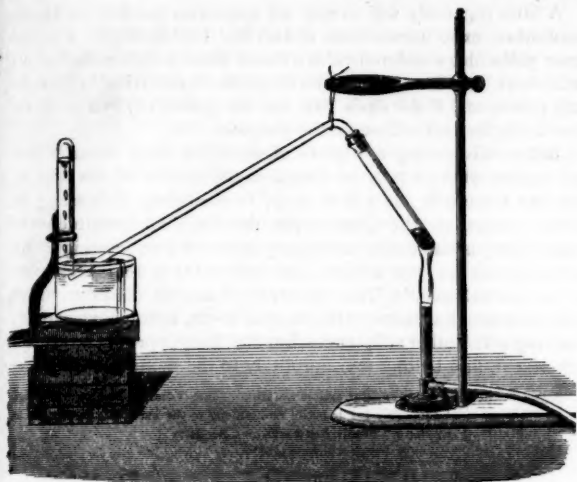
Take a bottle holding one or two pints, fit a cork to it, through which pass a glass or metallic tube, the end of which is drawn out so as to leave a small aperture at the top. Place in the bottle a few pieces of zinc, and some sulphuric acid, diluted with water, in the proportions of one part of acid to six of water, then insert the cork. You will immediately see bubbles of H rising. The explanation of this is as follows: The zinc takes O from the water, thus liberating H; the O forms an oxide on the surface of the metal, which would prevent further action, did not the acid dissolve the oxide, thus leaving a fresh surface to take the O, and continue liberating H until the metal disappears. After the H has been forming for two or three minutes, hold over the tube an inverted tumbler for a moment, remove the tumbler and then apply a match to the contents of tumbler. When the bottle has become filled with H you can light the gas at the top of the tube, and thus have a steady flame. Be careful not to attempt to ignite the gas until all of the air has been forced out of the bottle, as air mixed with H produces an explosive mixture. In the intense heat of the faint flame you can melt metals or glass. By placing a larger glass tube, open at both ends, over the flame, you may be able to produce the celebrated acoustic tones, varying in pitch and intensity with the size and length of the tube used. A hydrogen gun can easily be made by taking a tin tube five or six inches long (closed at one end), from one half inch to an inch in diameter; make a small aperture near the closed end; then invert the tube for a moment over the escaping H, keeping the small hole closed with the finger, place a cork in the open end, and apply a match to the hole. The cork will be forced out with a loud explosion. What compound is always produced when H is burned? Let us see. Invert a cold, dry tumbler over a burning jet, and you will always observe moisture gathering on its surface. Another pretty experiment may be performed with H by inserting the stem of a common clay pipe in a piece of rubber tubing, slip the other end of the tubing over the gas jet, prepare some strong soap suds, and with a little care you can blow beautiful soap bubbles with your pipe, which, by a skillful movement may be detached, and they will rise in the air like miniature balloons; by placing a burning match under them they will explode. Strike a bell in a large jar filled with H, and it has a squeaky sound. Our whole art and science of music would be changed if H should be mixed with the air to any great extent.

Nicely balance a flask or jar containing air; fill the same flask with H, and the beam will at once be seen to rise.

Let us find the antipodes of weight. Iridium, hammered to increase its density, is twenty-three times heavier than water; water is about eight hundred times heavier than air, and air is fourteen times heavier than H: $23 \times 800 \times 14 = 257,600$; that is, one quart of Ir would balance 257,600 quarts of H.

OXYGEN.

There are four kings among chemical substances: Oxygen, king of all the elements; gold, king of the metals; oil of vitriol, king of the acids, and potash, king of the bases.



PREPARATION OF OXYGEN FROM MERCURIC OXIDE—MATERIALS USED BY DR. PRIESTLY.

This term of distinction is given to oxygen because of its marvellous activity and range of powers; it unites with all elements save one, fluorine. Its grasping disposition is often resisted by man; he keeps it from destroying his house by painting it; from gnawing at the quivering nerves of his teeth by filling them; from devouring his fruits by canning them; and Monsieur Goffart has now taught us to save green food for our cattle, from its ravages by excluding O from our silos. In spite of its destroying power we can not live without it. The light and warmth in our homes are produced by its rapid union with fuel. Every moment we breathe we are absorbing it into our bodies, where it unites with waste matter, producing heat and energy, and removing that which would clog and poison the system. There is nothing in nature more beautiful than the plan by which the animal and vegetable kingdoms mutually sustain each other by the interchange of O. Look at this little aquarium; here are two or three shiners, some goldfish, and a few water plants. In this little world we may see exactly what goes on in the great world. That goldfish is inhaling O, which is conveyed into the capillaries, unites there with the carbon, forming CO_2 , which is exhaled, seized upon by the plant, and in the wonderful laboratory of its cells, the C is separated from the poisonous gas, and retained, while the O is thrown off, again to be used by the fish. Upon the nice adjustment of the plants to the animals, and vice versa, depends the life of both. While upon this subject we might note another interesting evidence of beneficent design in the provision made for both fish and plants.

Water absorbs gases with great readiness—some of them it takes more readily than others; for example, a pint of water will absorb seven hundred pints of ammonia gas. It will take but its own volume of carbonic anhydride under one pressure of the atmosphere.

The descending rain drops absorb these two gases and convey them to the rootlets of the plant, for food. More wonderful still, the Almighty has arranged that water should remove O from the air more readily than it does nitrogen; consequently the rain carries down the O to the fish in river, lake and ocean, adding its life-giving principle to the air, which is always contained in water. It is a pretty sight to watch the breathing of a fish as he sends the rapid currents of water through his gills in the act of aerating the blood, which, as it passes through, gives them a crimson color.

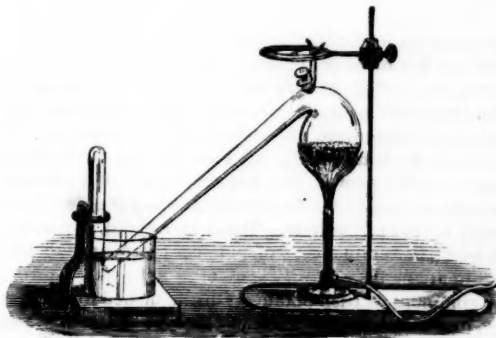
It may easily be proved that plants throw off O, by submerging any vigorous growing plant in a jar of water; in a short

time little bubbles will be seen clinging to the leaves; now fill a bottle with water, invert, and touch the little globules gently, when they will detach themselves and pass up into the bottle, displacing the water, and may afterward be used in experimentation. Perhaps some of you, while drinking at the brook, have noted these bubbles of O on the leaves of the graceful water plants below. This is the only place in nature where you can see O free, and indeed you do not see it here, for O is a colorless, tasteless, odorless substance; what you do see is the thin sphere of water which contains it.

O is held by many substances so tenaciously that we can not liberate it; this gives us "terra firma." Sand, and many rocks consist of O and silicon, but the greatest heat and heaviest blows can not separate them. There are materials, however, which readily yield their O. Dr. Priestly first found it by heating with a burning glass a compound known now as red oxide of mercury. The O went off, leaving the shining quicksilver.

You may repeat this historic experiment by placing the material in a test tube and heating it over an alcohol lamp.

Another substance used for this purpose is black oxide of manganese (MnO_2), but that which is now generally employed is a white salt, kept by every druggist, and usually called chlorate of potash (HClO_3).



PREPARATION OF OXYGEN FROM A MIXTURE OF POTASSIC CHLORATE (CHLORATE OF POTASH) AND MANGANESE DI-OXIDE.

Place a small amount of this, mixed with an equal quantity of the manganese, in a test tube, or flask, and heat over a flame. The O will be liberated, and may be bottled for use. A strange thing about this operation is that the MnO_2 yields none of the O, but comes out of the flask just as it went in. Such action, by mere presence, is called catalysis. We can not explain it, but have some such phenomena in social life, perhaps, when two people with an affinity for each other are having a delightful, confidential chat, and a third person joins the group, immediately producing silence—a plain case of catalysis! Having secured several jars of O we are now ready to test some of its interesting properties. Extinguish a candle and suddenly plunge it into a jar of O. It is relighted. A better way is to make a taper of waxed thread. This will keep the live coal better, and may be relighted many times. Attach to a wire a piece of charcoal bark. Ignite and place in another jar. Beautiful scintillations fill the jar, star like in form. Take a watch spring, heat one end and bend. Split a match and attach to the spring, light and place in the jar. It burns with great brilliancy.

Whittle out a little cup of chalk, or crayon, and place phosphorus in it. Touch the P with a hot wire and lower the cup, with a wire, into a jar of O. A beautiful combustion follows. In like manner sulphur may be burned, and produces a bright blue light.



A TAPER OR CANDLE BURNING IN OXYGEN.

A little ingenuity will supply all apparatus needed for these and other experiments with H and O. For example, a common pail with a wooden shelf in it two or three inches from the top makes an excellent pneumatic trough for transferring or gathering gases, and if the shelf can not be procured, two or three bricks in the pail will serve the purpose.

Before dismissing our glass of water we must remark that no matter where it may be found, in the depths of the sea or on the mountain; as a dew drop, or sparkling as spray; in lake Nyanza, or lake Chautauqua, the chemical constituents of water are just the same. Almighty care and wisdom weighs the atoms, even as "he weighs the mountains in scales and the hills in a balance." The *apparent* character of water, as to color, form, hardness, saltiness, and so on, is often varied by *mixing* with it other substances, but the changes produced are not chemical, and belong more properly to the domain of physics.

NOTE.—The illustrations in this article are from "The Young Chemist" of Prof. John Howard Appleton. We can heartily recommend to the members of the C. L. S. C., all of Prof. Appleton's admirable works on Chemistry.

STUDIES IN KITCHEN SCIENCE AND ART.

I. THE POTATO.

BY BYRON D. HALSTEAD.

The potato is undoubtedly the leading addition which the New World has made to the list of garden vegetables. Its importance as a food plant may be judged from the fact that during the year 1880 over one hundred and sixty-nine million bushels of potatoes were raised in the United States. If we could obtain the total yield in all countries for a single year, the figures would express only the simple fact of vastness. It only need be said that potatoes furnish the larger part of the food for many millions of people. Think of Ireland, for example, deprived of her annual crop of potatoes; it means famine and all its attendant ills.

The common, or Irish potato, as distinguished from the sweet potato, bears the botanical name of *Solanum Tuberosum*, and belongs to the natural order Solanaceæ. This group or family of plants is characterized by rank scented herbage, often abounding in narcotic poison. The flowers are regular, parts usually in fives, and the ovaries mostly two-celled and many-seeded. Among the more important members of the family are the tomato, egg-plant, cayenne pepper, and tobacco. Belladonna, hyoscyamus, and stramonium are better examples of the poisonous and medicinal properties of the plants in the order, which gives us so wholesome a food as the potato, and so vile a weed as tobacco. The herbage of the potato plant is not unlike that of its first and second cousins, but by means of these narcotic leaves and stems the plant is enabled to transform crude materials into starch and other valuable substances which are afterwards stored up in a suitable form for the use of man. The potato itself, which nearly all persons relish when well prepared for the table, is not a thick root, as many have supposed, but an enlarged underground stem, called a tuber. These thickened subterranean stems bear small leaves, reduced to mere scales, under which are buds, better known as eyes. A potato is as much a stem as the tender and delicious shoots of early spring asparagus. The potato plant has three kinds of stems: those bearing the foliage, those bearing the flowers and the underground stems which may be styled starch-bearing.

The early history of the potato is very obscure. It is doubtless a native of South America, where it has been frequently found in the wild state. The Spaniards are given the credit of first introducing the potato into Europe in the early part of the sixteenth century. It passed from Spain into France, and from there on into Germany and other countries of Europe.

The first potatoes to reach England were those carried by Sir Walter Raleigh on his return from Virginia in 1584. "In the time of James the First they were so rare as to cost two shillings (sterling) a pound, and are mentioned in 1619 among the articles provided for the royal household." The culture of the potato was encouraged by the Royal Agricultural Society. Since 1760 it has become an established garden and field crop, and one it would be a calamity to lose.

The chemical composition of the potato tuber varies greatly according to the conditions under which it has been grown, namely: soil, weather, manure, etc. It contains about seventy-five per cent. of water. The composition of the twenty-five per cent. of dry substance is as follows: protein, 2 per cent.; fat, .03; starch and other carb-hydrates, 20.7; fibre, 1.1; ash, .09. By protein is understood the various compounds containing nitrogen, like the gluten of wheat, white of egg, etc. This is considered the flesh-forming part of a food. Lean flesh is made up largely of protein compounds, or albuminoids, as they are sometimes called. The carb-hydrates contain no nitrogen, and are compounds of carbon, hydrogen and oxygen. Among the most familiar of this class are starch, sugar, and gums. The carb-hydrates, in contrast with the flesh-forming protein compounds are frequently called heat producing substances. This classification aids in giving a general idea of the part the two groups play in the animal economy. Both classes of foods are required, the amount of each depending upon the wear and tear of the body and the conditions of temperature, etc., under which the animal lives. A man who is working hard needs more of the protein compounds to build up the muscles than the person of leisure. When exposed to severe cold, an increase of the starchy substance is demanded to make good the losses caused by the excess of animal heat produced. From the average of many chemical analyses given above, it is seen that the potato is a heat-producing food, and not a muscle-forming food. The fat in foods—of which there is very little in the potato—is used both as fuel and to build up the fatty substance of the body. The proteins or albuminoids are the most expensive portions of any food; the fats come next, and the carb-hydrates last. (In this way a chemist is able to compute the nutritive value of a food from the per cent. of the classes of constituents found present by analysis.) Wheat contains about eleven per cent. of protein, and seventy per cent. of carb-hydrates. There is far less

water, but more than that, it has a higher ratio of protein. It is a richer food. Corn has the same per cent. of starchy matter, but only nine per cent. of the albuminoids. It is not so rich a food as wheat. Beans and peas have about fifty per cent. of oil and starch and twenty-five per cent. of the flesh-formers. This is a very high protein ratio, and those grains approach closely to the composition of meats, and may replace them to a large extent. This is all to show that both chemistry and culinary experience do not rank the potato as a rich food. It serves the animal economy best when eaten with some other substance far richer in protein. Thus we have meat and potatoes as a wholesome and complete food.

The potato thrives in an open, warm, deep, mellow and rich soil. If the soil is not naturally fertile it needs to be supplied with well rotted manure; or if this is not available in sufficient quantities, supplement with some good commercial fertilizer. Thorough tillage, that is, frequent plowing and harrowing, will supply two other essentials, namely: depth and mellowness. Drainage may be necessary to remove the excess of water, the presence of which shuts out the air, and renders the soil cold and unfit for growing plants. A soil that will grow a good crop of corn will usually yield a paying crop of potatoes. Both corn and potatoes grow for only a short season, and have no time to wait for plant food. The roots need to have all the plant food they can absorb close within reach. As a rule, land can not be made too rich for potatoes.

There is a wide difference of opinion as to the size and manner of cutting the "seed" potatoes. If we will remember that a potato is a stem it will be seen that planting potatoes is virtually setting out cuttings; as much so as when portions of a grape vine or a currant cane are placed in the ground. The potato to serve as "seed" should be well matured and carefully kept through the winter. It is poor economy to plant small and half matured tubers. As much care should be taken with the "seed" potatoes as in the selection of cions, with which to engraft a tree. This leads to another very important point in potato growing. Be sure and plant good varieties. The list of names of the varieties of potatoes would fill a volume. The Early Rose has been for several years the type of excellence. The Beauty of Hebron takes a front rank for quality and productiveness. The Peach Blow has long been a favorite, though now less grown. The White Elephant, Snow Flake, and Burbank are three of the better sorts. The point of growth in a potato is the bud or "eye," and the substance of the tuber around this eye furnishes it with nourishment for its initial growth. The results of experiments uphold the deductions of science

that it is best to cut large potatoes to single "eyes," guiding the knife so that each bud shall have an abundance of surrounding substance. The cut pieces may be planted in hills two and one-half feet each way, or in drills. A rapid and satisfactory method is to drop the pieces fifteen inches apart in the furrows made by a light plow. If placed in every third furrow, the rows will be wide enough for horse cultivation. In this way the plow prepares the place for the "seed," and afterward covers it. When the potato plants are just coming through the ground, the surface may be stirred with the back of an ordinary harrow. This loosens up the soil and kills the young weeds. The further culture consists in frequently passing the cultivator between the rows to keep the surface soil open and free from weeds. The soil may be thrown toward the vines after they have attained considerable size.

The potato has met with some serious enemies. The worst pest of late years is the Colorado beetle. This is now so wide spread and well known that a description is unnecessary. The remedies are numerous, but Paris green and London purple are the most effective. These arsenical compounds are applied in both the dry state and mixed with water. The latter is generally considered the better method. A teaspoonful of either the "green" or "purple" is stirred in a watering-pot and applied to the infested foliage through a fine nozzle. This voracious beetle has a natural enemy in the shape of a mite that sometimes occurs so abundantly as to completely cover the victim. Other insect enemies are the stalk borer and the large potato worm. Burn the vines infested with the former, and pinch off and crush the latter.

The wet rot, so destructive some seasons, is caused by a minute parasitic fungus which grows within the substance of the potato leaves and stems, and afterward descends to the tubers and causes them to decay. Wet and hot weather are particularly favorable for the development of this mould. Nothing has been successfully used to stay its ravages. This rot has swept over Europe, Great Britain and Ireland, at different times, bringing great distress to all the inhabitants, but especially to the lower classes, whose daily food is made up largely of the potato. The tubers should be dug so soon as the fungus is found to have "struck" the foliage. In this way they may be removed before the rot has invaded them. Store the potatoes in a dry and uniformly cool place. As the rot does not come until midsummer, it is best to plant quick maturing varieties, and plant these early. In this way some of the insect enemies may also be avoided. Take it altogether, the potato is an easy and profitable crop to raise.

METHODS OF COOKING THE POTATO.

BY MRS. EMMA P. EWING.

There are only seven distinct methods of cooking potatoes, namely: roasting, baking, boiling, steaming, stewing, frying, and broiling. But the culinary possibilities of this simple esculent are so illimitable it can be served in about as many different ways as there are days in the year, and be acceptable in all of them, if properly done; for no member of the vegetable kingdom returns a richer reward for the care bestowed upon it than the potato.

ROASTED POTATOES.—The primitive method of roasting potatoes under, or among the ashes of a wood fire, is an excellent one. Bury the potatoes in hot ashes to the depth of two or three inches, cover with live coals, and leave undisturbed for half an hour, or until thoroughly roasted. As soon as done, which can be ascertained by taking one of them from its bed and testing it, remove, brush clean, break tenderly, place in a dish, and serve. The starch in a potato will absorb moisture when the starch cells are broken by heat, and unless roasted or baked potatoes are cracked as soon as cooked, and the steam

allowed to escape, they will become sodden, dark colored, and rank in flavor. After being broken they can be kept for a considerable length of time, without much deterioration.

BAKED POTATOES.—Potatoes can be baked by placing them in the oven of a stove or range, either in a pan or on the grate. To bake a potato just right, it should be washed clean, wiped dry, put in an oven at a moderate temperature, and subjected to a gradually increasing heat until the skin assumes a light brown color, and becomes firm. The white flesh inside will then be well cooked and mealy, and will possess the exquisite aroma and delicious flavor of a perfectly roasted potato. If the oven is at the proper temperature, potatoes will bake in from forty to sixty minutes, according to size, and like those roasted under the ashes, should, as soon as done, be removed and broken.

If the flesh is scooped out of partly baked potatoes, mashed, mixed with sausage meat, seasoned, replaced in the scooped-out shells, and re-baked, they are called German potatoes;

if it is mixed with grated cheese, bread crumbs and other ingredients, and similarly treated, they are called stuffed potatoes.

Potatoes are nice when pared and baked with fowl or meat of any kind. Wash, pare, parboil, and place them in the pan containing the fowl, or meat. Turn over when partly cooked, that they may brown evenly. They can be baked in drippings, without meat, and also without being parboiled.

Kentucky potatoes are potatoes pared, sliced, put in layers in a baking dish, moistened with milk, seasoned with salt, pepper, etc., and baked in a quick oven. If they are moistened with broth or other liquid, and the seasoning varied somewhat, each variation will produce a slightly different dish, and each can, without impropriety, be named after one of the different States of the Union.

BOILED POTATOES.—Very few people know how to boil a potato so it will be dry, mealy and fine flavored. To prepare potatoes for boiling unpared, or in their jackets, wash well in lukewarm water with a brush, and rinse in cold water. To prepare for boiling without their jackets, wash, pare, remove all the eyes and dark spots, and soak well in cold water. To boil either pared or unpared, put the potatoes, when prepared, in a liberal allowance of slightly salted boiling water, let them boil gently until tender enough to be easily pierced with a fork, then drain, cover with a folded towel, and set back on the range, or near the fire, to dry off. If treated in this manner, they will, when served, be tender and mealy—perfect powdery snow balls in appearance—and will be apt to tempt even the most fastidious.

Scooped potatoes are made by scooping balls of the required size from pared potatoes, with a vegetable scoop, boiling them, and serving with a sauce or gravy of some kind. Old potatoes treated in this manner are quite frequently mistaken for new ones, even by professed epicures.

STEAMED POTATOES.—Prepare as for boiling, and cook in a steamer over a pot or kettle of boiling water. When only a few potatoes are wanted, a small sized steamer should be used, but by placing a folded towel or cloth over the potatoes to prevent the escape of steam, even two or three can be nicely cooked, without inconvenience, in almost any sized steamer. This is an excellent mode of cooking potatoes, and should be more generally adopted.

STEWED POTATOES.—Cut pared potatoes in slices about an eighth of an inch in thickness, put in salted boiling water, cook gently until moderately tender, then drain off the water, add milk, and season with salt and pepper.

Use cream and butter, instead of milk, in its preparation, and plain stewed potato is converted into potato *à la crème*. A little minced parsley, if liked, can be added in either case.

FRIED POTATOES.—Slice raw pared potatoes very thin, soak well in cold water, drain the slices in a colander or sieve, dry them on towels by rolling and tumbling from one towel to another, separate them, and drop into a kettle of boiling grease. As soon as they assume a light brown color, lift with a skimmer, drain on a sieve, sprinkle with salt, and serve. The browning will be facilitated if the slices, when partly cooked, are taken from the kettle, exposed to the air a few seconds, and then returned to the boiling grease. These are the famous Saratoga potatoes, or Saratoga chips.

If a crimped knife, instead of a plain one, is used for slicing the potatoes, they will, when fried, be *Julienne* potatoes. If, instead of being sliced, the potatoes are cut in balls with a vegetable spoon or scoop, they will, when fried, be *Parisienne* potatoes, etc., etc.

Potatoes cut in thin slices in long strips, in globular, angular, rhomboidal, and other irregular shapes, and fried in a kettle with a quantity of grease, are served as Saratoga, *Julienne*, *Parisienne*, and so on, while those fried in a spider or skillet in a smaller quantity of grease are served as potato *à la Française*, potato *à la Provençale*, potato *à la Barigoule*, etc., etc. But however varied the styles and however fanciful the names

under which potatoes cooked in grease are made to do duty, they are all simply *fried potatoes*; and the important feature of their preparation is to have the grease in which they are to be fried—whether lard, butter, oil, or drippings—boiling hot when they are put into it, and to keep it so during the entire process of cooking. It is generally supposed that fried potatoes to be at all eatable must be served the moment they are taken from the fire; but if kept moderately warm, and at an even temperature, any of the above varieties—although not so delicious as when freshly cooked and hot—will remain in quite nice condition a considerable length of time.

BROILED POTATOES.—Parboil potatoes, cut in slices about half an inch in thickness, place in a wire gridiron, and broil over a slow fire until well browned on both sides, then season with salt and pepper, and serve hot, with a little melted butter poured over them. Cold boiled potatoes are very nice broiled in the same manner.

MASHED POTATO.—Special attention should be given to the preparation of such a universally favorite dish as mashed potato. Boil or steam pared potatoes till well cooked, drain, dry off, mash till fine and free from lumps, in a warm kettle or pan, stir in a little warm milk—unless the potato is preferred dry—add a small lump of butter, season with salt and pepper, and beat until light, with a wooden spoon or potato masher. The secret of making nice mashed potato consists in mashing the potato until very smooth before, and beating it until very light after, it has been seasoned.

Cream potato is made by stirring cream into nicely mashed potato until of the desired consistency—snow potato by rubbing the potato through a colander or sieve, and allowing it to pile up in the dish in a snowy mass, and curly potato by rubbing it through a colander, letting it fall in long, white curls, in a pyramidal form, on the dish in which it is to be served, and then putting it in a hot oven till the surface is crisped.

Potato croquettes are made by enriching mashed potato with beaten egg yolk, seasoning with salt, pepper, nutmeg or other condiments, forming into little balls or rolls, dipping in egg and bread crumbs, and frying in boiling grease.

Duchesse potato is made by adding beaten egg to mashed potato, squeezing it through a pastry bag, or cutting in narrow strips two or three inches in length, and browning in the oven.

REWARMED POTATOES.—Cold potato should never be thrown away. It should all be saved and utilized. There are numerous ways in which cold potato can be rewarmed, and in many of them it is almost as good as when first cooked. Much of the potato served up at leading hotels in fanciful styles and with foreign names, is merely rewarmed potato, and can be prepared readily and inexpensively in any private kitchen.

To stew cold potato.—Slice cold boiled potatoes, put in a stew pan with cold gravy of any kind, season with salt and pepper, stew gently for ten minutes, or until thoroughly heated, and then serve.

Dust potato, heated in this style, with bread crumbs, grated cheese, etc., and brown in the oven, and it becomes potato *au gratin*.

Stir together in a sauce pan over the fire, a little butter and flour, add some milk, stew cold sliced potato in it, and the product, when seasoned with salt, pepper, lemon juice and chopped parsley, will be *maitre d'hotel* potato. Omit the seasoning from potato thus warmed, and pour caper sauce over it, and it will be transformed into potato *polonaise*.

To fry cold potato.—Cut cold boiled potatoes in slices, dredge lightly with flour, and fry brown in butter, lard or drippings—or, fry without dredging—or, hash fine, season with salt and pepper and fry.

Cut cold boiled potatoes in little balls, fry, with an onion, in oil, butter, lard or drippings, and it will be potato *à la Provençale*. Cut them in the shape of olives, fry in olive oil, with a spoonful of chopped herbs, and it will be potato *à la Barigoule*.

Potato Hash.—Melt some butter or drippings in a spider or

skillet, pour in a little sweet milk, season with salt and pepper, add cold boiled potato hashed, cover closely, and set where it will simmer slowly until the potato is thoroughly heated.

Potato and Meat Hash.—Mix well, in about equal proportions, finely minced cold meat of any kind, and cold potato, moisten with milk, gravy, or soup stock, season with salt and pepper, make into a roll, or shape into cakes, put in a greased pan and bake in the oven.

Potato Fish Balls.—Mix two parts of mashed potato with one part of finely picked up fish of any kind, season to taste, form into balls or cakes, and fry brown. The grease in which fish balls are to be fried should be boiling hot before they are put into it. Freshly cooked potato is considered best for making fish balls, but cold answers very nicely.

Potato Soup.—Mix together over the fire an ounce each of butter and flour until the mixture begins to bubble, then add gradually a quart of boiling milk, season with salt and pepper, and stir in half a pint of mashed potato that has been rubbed through a sieve. The quantity of potato can be varied to suit the taste, and, if liked, a little minced may be added. This is sometimes called potato *purée*, and sometimes *potage Parmen-tier*—after the man who introduced the potato into France.

Potato Cakes.—Mash cold potato to a smooth paste with a little milk, season to taste, form into cakes half an inch in thickness, and either fry or bake.

Potato Biscuit.—Add a cup of milk to a quart of mashed potato, stir in sufficient flour to make it the proper consistency, mold into biscuit half an inch thick, and bake on a griddle or floured pan.

Potato Soufflé.—Put a quart of mashed potato in a saucepan over the fire, add an ounce of butter, season to taste, pour in gradually half a pint of milk, stir till the mixture begins to thicken, then turn into a baking dish, smooth the surface with a knife, put in a quick oven and brown lightly.

Potato Pie.—Cover the bottom of a baking dish with cold roast meat of any kind cut in small pieces, add a layer of cold sliced potatoes, then meat and potatoes in alternate layers till the dish is full. Add a little gravy or soup stock, or a lump of butter, season with salt and pepper, cover with a crust and bake.

Potato Fritters.—To a pint of milk add the yolks of three eggs, half a dozen medium sized cold, boiled potatoes grated, or finely mashed, and flour enough to make a batter the proper consistency for ordinary fritters—add the beaten whites of the eggs, and a little salt, and fry in boiling lard.

Potato Puffs.—To two cups cold mashed potatoes add two tablespoonfuls of butter, two beaten eggs, a cup of milk, and a little salt. Stir well together, pour into a baking dish, and bake in a quick oven.

With a lively imagination, a liberal supply of potatoes, and a few other ingredients, one can go on and multiply almost indefinitely the different styles in which potatoes can be prepared for the table; but through all the variations the seven cardinal methods of cooking them remain unchanged, and cover and include all the styles of serving, whether designated by plain unassuming names or dignified with pretentious, aristocratic titles.

SUNDAY READINGS.

SELECTED BY THE REV. J. H. VINCENT, D.D.

[October 5.]

THE STRANGE BARGAIN.—In a well known city there lived two merchants—one of them a skillful arithmetician, and generally an able man; the other, inexperienced in figures, and by no means a match for the former in talent. They made the following bargain: The first sold a horse to the second; but instead of fixing a definite sum of money as the price, they agreed that it should be regulated by the thirty-two nails with which the four shoes were fastened to the animal's hoofs, and should be paid in millet, one grain being given for the first nail, two for the second, four for the third, eight for the fourth, and so on; that is, doubling the number at every nail. The buyer was at first delighted at purchasing a fine charger for what he fancied a very moderate price; but, when the account came to be settled, he found that the quantity of grain which, by the terms of the agreement, he was required to pay, was enormous. In fact, he would have been reduced to beggary, if some sensible friends had not interposed and procured a dissolution of the bargain. Gotthold, who heard the story, observed: "Well does it exemplify the wiles of Satan. By promising merry hours and temporal gain, he persuades and seduces man at first into what he calls venial faults, and labors to keep them in these until they have grown into a habit. Afterwards he advances by geometrical progression. Sin grows from sin, and one transgression follows another, the new being always the double of the old; and so the increase proceeds, until at last the base pleasure which has been bought, can be paid for only with that which is above all price, namely, the immortal soul; unless, indeed, God mercifully interpose in time with his holy spirit, opening the sinner's eyes, convincing him of the deception, and inducing him to revoke the bargain, and implore help and deliverance from his Savior, Jesus Christ. It is therefore best to keep one's self aloof in every way from Satan and his concerns, and to regard no sin as venial and small. How can it be that, when it is committed in opposition to the holy will of the Most High God?

My God! teach me to reckon every sin great, so long as I live; but oh, let me look upon the very greatest sins as little, when I die!

THE LOCK.—A lock was shown to Gotthold, constructed of rings, which were severally inscribed with certain letters, and could be turned round until the letters represented the name JESUS. It was only when the rings were disposed in this manner that the lock could be opened. The invention pleased him beyond measure, and he exclaimed: Oh that I could put such a lock as this upon my heart! Our hearts are already locked, no doubt, but generally with a lock of quite another kind. Many need only to hear the words *Gain, Honor, Pleasure, Riches, Revenge*, and their heart opens in a moment, whereas, to the Savior and to his holy name it continues shut. Lord Jesus, engrave thou thy name with thine own finger upon my heart, that it may remain closed to worldly joy and to worldly pleasure, self-interest, fading honor and low revenge, and open only to thee!

THE FRUITFUL TREE.—Passing a garden, Gotthold observed a pear tree whose branches were bending to the ground, as if they would break with the weight of the fruit. On asking a friend, who was with him, "What do you think it is which this tree needs?" he was answered: "A prop or two to support the overloaded boughs." "No," rejoined Gotthold, "but hands to pluck, and baskets to contain the fruit. It presents to us a beautiful emblem of the Lord Jesus, our beloved Savior. He needs me, and I him; and so we suit each other, nor think it strange when I say that the Lord Jesus needs me, I mean that he needs me as this tree does baskets, or as the widow's cruse, which God had blessed, needed empty vessels to contain the oil. * * * Love constrains the Lord to seek me, as my wants do me to seek him. He possesses all things—heaven, earth, and all which they contain; but these he does not need. What he needs is souls and hearts to replenish with his grace and spirit, and bless with his salvation. O mighty love, tender compassion, and mercy of our Savior! He, who needs

nothing else, can not do without sinful and wretched man."

THE CHILD AT PLAY.—A little boy was running about in an apartment, amusing himself as children are accustomed to do. His money was potsherds, his house bits of wood, his horse a stick, and his child a doll. In the same apartment sat his father, at a table, occupied with important matters of business, which he noted and arranged for the future benefit of his young companion. The child frequently ran to him, asked many foolish questions, and begged one thing after another as necessary for his diversion. The father answered briefly, did not intermit his work, but all the time kept a watchful eye over the child to save him from any serious fall or injury. Gotthold was a spectator of the scene, and thought with himself: "How beautiful an adumbration of the fatherly care of God! We, too, who are old children, course about in the world, and often play at games which are much more foolish than those of our little ones; we collect and scatter, build and demolish, plant and pluck up, ride and drive, eat and drink, sing and play, and fancy that we are performing great exploits, well worthy of God's special attention. Meanwhile, however, the Omnipotent is sitting by, and writing our days in his book. He orders and executes all that is to befall us, overruling it for our best interests in time and in eternity; and yet his eye never ceases to watch over us, and the childish sports in which we are engaged, that we may meet with no deadly mischief."

"My God! such knowledge is too wonderful for me. It is high, and I can not attain unto it; but I shall thank and praise thee for it. O, my Father! withhold not from me thy care and inspection, and, above all, at those times when, perhaps, like this little one, I am playing the fool!"—*From Gotthold's "Emblems."*

[October 12.]

Thus all history is swallowed up in boundless sorrow and remorse for that he is still laden with his boundless infirmity. But he hath delight and joy in that he seeth that the goodness of God is as great as his necessities, so that his life may well be called a dying life, by reason of such his griefs and joys, which are conformable and like unto the life of our Lord Jesus Christ, which from beginning to end was always made up of mingled grief and joy. Grief in that he left his heavenly throne and came down into this world; joy in that he was not severed from the glory and honor of the Father. Grief in that he was the son of man; joy in that he nevertheless was and remained the Son of God. Grief, because he took upon him the form of a servant; joy in that he was nevertheless a great Lord. Grief, because in human nature he was mortal, and died upon the cross; joy, because he was immortal, according to his godhead. Grief in his birth, in that he was once born of his mother; joy, in that he is the only begotten of God's heart from everlasting to everlasting. Grief, because he became in time subject to time; joy, because he was eternal before all time, and shall be so forever. Grief, in that the word was born into the flesh, and hath dwelt in us; joy, in that the word was in the beginning with God, and God himself was the word. Grief, in that it behooved him to be baptized, like any human sinner, by St. John the Baptist, in the Jordan; joy, in that that the voice of his heavenly Father said of him: "This is my beloved Son, in whom I am well pleased." Grief, in that, like others, sinners, he was tempted of the enemy; joy, in that the angels came and ministered unto him. Grief, in that he oftentimes endured hunger and thirst; joy, because he is himself the food of men and angels. Grief, in that he was often wearied with his labors; joy, because he is the rest of all loving hearts and blessed spirits. Grief, forasmuch as his holy life and sufferings should remain in vain for so many human beings; joy, because he should thereby save his friends. Grief, in that he must needs ask to drink water of the heathen woman at the well; joy, in that he gave to that same woman to drink of living water, so that she should never

thirst again. Grief, in that he was wont to sail in ships over the sea; joy, because he was wont to walk dry shod upon the waves. Grief, in that he wept with Martha and Mary, over Lazarus; joy, in that he raised their brother Lazarus from the dead. Grief, in that he was nailed to the cross with nails; joy, in that he promised paradise to the thief by his side. Grief, in that he thirsted when hanging on the cross; joy in that he should thereby redeem his elect from eternal thirst. Grief, when he said, "My God, my God, why hast thou forsaken me;" joy, in that he would, with these words, comfort all sad hearts. Grief, in that his soul was parted from his body, and he died and was buried; joy, because on the third day he rose again from the dead, with a glorified body.

Thus was all his life, from the manger to the cross, a mingled web of grief and joy. Which life he hath left as a sacred testament to his followers in this present time, who are converted unto his dying life, that they may remember him when they drink of his cup, and walk as he hath walked! May God help us so to do! Amen.—*From Tauler.*

[October 19.]

I count it the most grievous offense which the honor of Christianity has to sustain, that some of its ostentatious disciples confine their piety to the Sabbath and its ordinances, and banish God from the week-day employment of ordinary business. Whence that disgusting censoriousness which spreads the tincture of gall over so many a religious conversation? Whence that low tone of honesty and truth, which * * is so often found to accompany the uniform appearance, and I believe, too, the occasional reality, of zeal in matters of religion? Whence, in fact, that separation of religious from social duty we so often meet with, not merely in their conception, but in their example and practice? * * Alas! against them, too, we can prefer the charge of not "doing all things," and we can substantiate it. With the mark of godliness upon their forehead, their conduct for the great majority of their time says: "We will not have God to rule over us." He is only their occasional God. The easy offering of their prayers in the family, or of their attendance in the church and at the table, is ever in readiness. But the living sacrifice of the whole body, soul, and spirit, is withheld from him. He is deposed from his right and sovereignty over every minute of their existence; and instead of his law reaching to all their concerns, and bringing the whole man under its obedience, we see that in the vast majority of their doings they cast him off, and are as much the slaves of their own temper, and inclination, and interest, as if God had not a will for them at all times to obey, and as if Christ had never set an example before them to study and to imitate.

Hold, ye hypocrites! who talk of this as the season that is given to the love of Christ and to the memorial of his atonement! Did not Christ order away a disciple from his altar?—and upon what errand? Upon what you, it seems, would call the very worldly and unsuitable employment of making up a quarrel with a neighbor? Did not Christ say, "If ye love me, keep my commandments?" And yet the minister who expounds these commandments, and presses their observance upon you, is looked upon as preaching another gospel than what Christ left behind him. Oh! when will men cease to put asunder what God hath joined; and taking their lesson from the Bible, as little children, submit to it without a murmur, in all its parts, and in all its varieties!

But let the minister of God be gentle with all men, and humble under the feeling of his own infirmities. Let him, however zealous for the truth as it is in Jesus, learn that there is nothing in the purity of his own practice to justify a tone of indignant superiority to others. It is easy to see and to approve that which is excellent; but how shall we compass the doing of it? It is easy to expatiate on the frailties and the delusions of men; but how shall he manage for himself, when told by his own melancholy experience that he shares in them?

It is easy to acknowledge the right and the sovereignty of God in all things, and to press his earnest assurances upon you, that you are wrong, if you suffer not the word of exhortation urging you to the daily walk and duties of the Christian; but to what refuge can he fly, when he finds that he is himself a defaulter, and that after having warmed his heart at the inconsistency of others, and penned his sentences against it, he mingles in the business of his work and his family, and forgetting that the eye of his God follows him there, falls a helpless victim to the imbecilities of our ruined nature?—*From Dr. Chalmers.*

[October 26.]

The Christian minister needs often to be reminded of this great end of his office, the perfection of the human character. He is too apt to rest in low attainments himself, and to be satisfied with low attainments in others. He ought never to forget the great distinction and glory of the gospel—that it is designed to perfect human nature. All the precepts of this divine system are marked by a sublime character. It demands that our piety be fervent, our benevolence unbounded, and our thirst for righteousness strong and insatiable. It enjoins a virtue which does not stop at what is positively prescribed, but which is prodigal of service to God and to mankind. The gospel enjoins inflexible integrity, fearless sincerity, fortitude which despises pain and tramples pleasure under foot in the pursuit of duty, and an independence of spirit which no scorn can deter and no example seduce from asserting truth and adhering to the cause which conscience approves. With this spirit of martyrs, this hardness and intrepidity of soldiers of the cross, the gospel calls us to unite the mildest and weakest virtues; a sympathy which melts over others' woes; a disinterestedness which finds pleasure in toil, and labors for others' good; a humility which loves to bless unseen, and forgets itself in the performance of the noblest

deeds. To this perfection of social duty, the gospel commands us to join a piety which refers every event to the providence of God, and every action to his will; a love which counts no service hard, and a penitence which esteems no judgment severe; a gratitude which offers praise even in adversity; a holy trust unbroken by protracted suffering, and a hope triumphant over death. In one word, it enjoins that, living and confiding in Jesus Christ, we make his spotless character, his heavenly life, the model of our own. Such is the sublimity of character which the gospel demands, and such the end to which our preaching should ever be directed.

* * * We need to feel more deeply that we are entrusted with a religion which is designed to ennoble human nature; which recognizes in man the capacities of all that is great, good and excellent, and which offers every encouragement and aid to the pursuit of perfection. The Christian minister should often recollect that man, through prepossession to evil, has yet power and faculties which may be exalted and refined to angelic glory; that he is called by the gospel to prepare for the community of angels; that he is formed for unlimited progress in intellectual and moral excellence and felicity. He should often recollect that in Jesus Christ our nature has been intimately united with the divine, and that in Jesus it is already enthroned in heaven. Familiarized to these generous conceptions, the Christian preacher, whilst he faithfully unfolds to men their guilt and danger, should also unfold their capacities for greatness; should reveal the splendor of that destiny to which they are called by Christ; should labor to awaken within them aspirations after a nobler character and a higher existence, and to inflame them with the love of all the graces and virtues with which Jesus came to enrich and adorn the human soul. In this way he will prove that he understands the true and great design of the gospel and the ministry—which is nothing less than the perfection of the human character.—*From Channing.*

GLIMPSES OF ANCIENT GREEK LIFE.*

I.—THE GREEK TOWN AND HOUSE.

Whereas modern life is very much a country life, and we see all our plains and hills studded with farmsteads and well kept houses, it was seldom so with ancient, as it is never so with modern, Greece. In old days the fear of pirates and plunderers, in later days the taste for talking and for politics, kept men from staying in the country, and brought them into the towns, where they found safety and society. The tyrants alone insisted upon country life. Thus we find in Homer that outlying farms belonging to the nobles were managed by trusty slaves, who grazed cattle, and stall-fed them for city use. In Hesiod's time it was the poor farmer only who dwelt in the country; fashionable and idle people always came together in the towns. The very same facts meet us when we read the Greek novels of the latest age, such as the *Story of Daphnis and Chloe*. There the rich citizens of Mitylene only come out rarely, like many Irish landlords, to visit their tenants and their flocks. There are only two large instances of Greek gentry living from choice in the country. The first is that of the old Attic gentry, whom Thucydides and Aristophanes describe as living luxuriously on their estates, and coming seldom to Athens. The second is that of the gentry of Elis, who were often, Polybius says, complete strangers for generations to the town. This was so because Attica was protected by her forts and fleets from sudden attack in these early days, and because the Greeks by common consent respected the land of Elis as sacred on account of the Olympic games. Accordingly, Xenophon, who was a sportsman, settled in this country when he retired from his wars. But we must pay our chief at-

tention to city life as the almost universal form of Greek society.

The older Greek towns were usually some miles from the sea, because many pirates went about the coasts. These towns grew out from a castle, or *Acropolis*, which at first had been the only fortified refuge for the neighboring people in times of danger. Of this we have a remarkable example in the very old ruins of Tiryns on the plain of Argos. When the population increased, they built their towns round this fort, and walled them in. But the Acropolis or hill fort, generally on some steep crag, was of course the strongest and safest part of the town. It was also the seat of the oldest temples, and of the god who took the town under his special charge. Hence it was often a sacred place altogether, and not occupied with common houses. If the town prospered, there grew up at the nearest harbor a roadstead or seaport town, where merchants and sailors carried on their trade. Thus Athens with its Acropolis is three miles from the nearest sea, and more than four miles from the Peiræus, which became its port because the harbor was so excellent. The same may be said of Argos, Megara, and other towns. Thus Corinth had even two ports, one on either sea, and both at some miles distance from the great rock on which its citadel, the Acrocorinthus, was situate. Sparta alone had no citadel, because the passes into its plain were very difficult and easily defended. It had not even walls, but looked like a few mean villages close together. This was a remarkable exception.

The citadel was defended by walls, wherever the natural rock was not steep enough, and supplied with tanks for water, except in such rare cases as that of Corinth which has a rich fountain on the top of its great rock. If you looked down from any of these great citadels upon the town beneath, the

* Selected from J. P. Mahaffy's "Old Greek Life."

most striking objects were always the temples and other public buildings which were meant to be admired from without, whereas the private houses were externally poor and shabby. So also the public squares and markets were large and imposing, often surrounded by colonnades and porticoes where people lay in the sun, or even slept at night. These colonnades were adorned with rows of statues; but the streets were narrow and dirty. The great contrast to any modern city must have been first of all the absence of all spires and pinnacles, as all Greek architecture loved flat roofs, and never built even in many stories. Then the forest of modern chimneys was also absent—an advantage which may be held fully to make up for the absence of even splendid steeples. All private houses were flat and insignificant, for the Greek never intended his house to be admired from without, he merely meant to shut out the noise and the thoroughfare of the street, and spent all his care on inner comforts.

While we build our houses facing the street, with most of their ornament intended to be seen by those who pass by, the Greek did all he could to shut out completely all connection with the street. He never had ground floor windows facing the street, and his house looked like a dead wall with a strong door in it, furnished with a knocker and a handle. This door opened outward, which made it safer for those within, but when they were coming out they used to knock inside lest passers-by might be thrown down when the door was pushed open. Richer houses did not open directly on the street, but on a porch which was not regarded as part of the house. Directly inside the hall door was a narrow hall with a porter's lodge opening off it, in which a slave sat, who was put to that work or to that of attending boys, when not useful for anything else. You passed through the hall or passage into an open square court, which was the center of the house, and was surrounded by a covered colonnade or cloister. The various men's rooms and the dining room opened upon this cloister. The same general plan was adopted by the Romans, and inherited by the modern Italians, so that most Italian palaces in Genoa, Florence, and elsewhere are built in this way. Opposite the entrance was a second door, which led from the court into the women's apartments, and here was situated the bed chamber of the master and mistress of the house. In richer houses the women's rooms were built round a second court like the first. But more commonly they did not occupy so much room, and were often placed on a second story, raised over the first at the back part of the building, with a staircase going up from the court. The Greeks preferred living on the ground floor, and their houses were not lofty blocks, like those of our streets. The bed rooms and sitting rooms round the court were usually small and dark, being mostly lighted only through their door into the cloister. The upper story had windows. The roof, which was tiled, like ours, was so flat as to allow people to walk upon it. The pantries and store rooms were generally at the back of the house, and near them the kitchen, which alone was supplied with a chimney. The other rooms seldom required a fire, and, if necessary, were heated with braziers of hot coke, or charcoal. The covered way upon which they opened made them cool in summer. Of course the palaces of early kings and the country houses of the rich Attic nobles had larger rooms and courtyards than ordinary city houses, but their plan was not different. Homer describes their halls as ornamented by plates of bright metal on the walls—a fashion preserved in the house of Phocion at Athens, and of which we still have traces in the so-called treasure house of Atreus, near Mycenæ. Fresco painting and rich coloring on the walls did not come into fashion till the fourth century B. C., and then became so common that we find almost all the houses in Pompeii, which was really a Greek town, though in Italy, ornamented in this way. There are large panels of black, scarlet, or yellow, surrounded with the borders of flowers, and in the center of the panel there are figures painted, when the owner could afford it. The same style

of ornament, with far better execution, may be seen in the chambers of the palace now excavated on the Palatine at Rome.

As the Greek citizen lived chiefly in the open air, and in public, and regarded his house merely as a safe and convenient place to keep his family and store his goods, it was not to be expected that his furniture should be expensive or elaborate. The small size of the rooms and the dislike of the Greeks for large entertainments also tended to the same economy. Besides, the low valuations of furniture alluded to in several speeches made in the law courts of Athens prove it clearly as a general rule in earlier days, though some cities, such as the rich Sybaris, may have formed exceptions. In later days, with the decay of public spirit, greater luxury prevailed in private life.

We must therefore consider early Greek household furniture to have been cheap and simple, but remarkable for a grace of design and beauty of form which have never since been rivalled. And these were combined with a diligent attention to comfort and to practical use. Thus the Greek chair which is often drawn on vases, and which is reproduced in marble in the front row of the theater at Athens, as we still see it, is the most comfortable and practical chair yet designed. So also the pots and pitchers and vases which have been discovered in endless variety, are equally beautiful and convenient. The chief articles of which we hear are chairs, stools and couches made in ornamental wood work, with loose cushions (unlike our modern upholstery); there were also high-backed arm-chairs, and folding stools often carried after their masters by slaves. Though men of ruder ages and poorer classes were content to sleep between rugs and skins on the ground, and a shake down for a sudden guest was always such (and is so still); yet the Greeks had beds of woollen mattresses stretched on girths. Tables were only used for eating, and were then brought in, and laid loosely upon their legs. In early days each guest had a separate table for himself. This absence of solid tables must have been the most marked contrast between a Greek room and ours. People wrote either on their knees (as they now do in the East) or upon the arm of a couch. Whatever ornaments they kept in their rooms seem to have been placed on tripods, which often carried a vase of precious metal and of elegant workmanship. The wonderful variety and beauty of their lamps must also have been a remarkable feature. They possessed all manner of cups, bowls, jars, and flasks for wine, and water, and oil, and we have long lists of names for kitchen utensils, probably not very different from those found at Pompeii. They used plates and dishes, and sometimes knives and spoons at meals, but never forks.

II.—THE GREEK—HIS DAY AND HIS DRESS.

The Greeks learned the division of the day into twelve hours from Babylon, and Plato is said to have invented a water clock marking the hours of the night in the same way. But in ordinary life, according to the old fashion, a night and the following day were regarded as one whole and divided into seven parts. There were three for the night, one when the lamps were lit, the next the dead hours of the night, and then the dawn, when the cocks begin to crow. The day was divided into four: early morning, the forenoon, when the market place began to fill, the midday heat, and the late afternoon. As in all southern countries now-a-days, where midday is a time of sleep or idleness, so in old times the Greek rose very early, generally at the dawn of day. His ablutions were but scanty, and there is no trace of any bath in the morning. Indeed the general cleanliness of the Greeks must rather be compared with that of other modern nations than with ours. In older days the hair was worn long, and elaborately dressed, as we can see from coins, so that this must have cost some trouble. But shaving the beard did not come in as a general fashion till Alexander's time, and even then shaving often and having very white teeth are mentioned as rather foppish.

When dressed, the Greek took a very slight meal, corresponding to the coffee now taken in Greece and elsewhere upon getting up, and merely intended to stave off hunger till late breakfast. It is said to have consisted of bread and wine. He then went to call on such friends as he wished to see on business, before they left their houses. The same fashion prevailed at Rome. When this was done, he went for a morning walk or ride, and if a townsman, to see his farms and crops, and give directions to his country steward. But if he lived in the country, he must start early to be in the city when the market place filled. For if there was important public business the assembly met very early, and in any case he there met all his friends, visited the markets and shops, and if a merchant, was practically on 'Change at this hour.

At noon all business stopped, and the public places were deserted, when he returned to his breakfast. The modern Greeks, in country parts, still spend half the day in this way before they breakfast. The poorer classes who dined early in the afternoon, and who probably had eaten something more at early breakfast, spent their midday hours, without going home, in barber's shops, in porticoes, and other places of meeting, where they either slept or gossiped, as their fancy led them. Law-suits, at which speeches were made and evidence taken, must have been carried on during this part of the day also. The breakfast of the better classes was a substantial meal, probably serving as dinner for the children, and consisted, like the modern Greek breakfast, of hot dishes and wine. It was, however, thought luxurious to eat two heavy meals in the day, and much wine drinking before dinner was regarded with the same aversion as tipping is now-a-days. When the day became cooler, men went out again, partly to practice gymnastics, which ended in later times with a warm bath, partly to see others so occupied and talk to their friends. Toward sunset they returned home to their dinner, the principal meal of the day, and the only one at which the Greek entertained his friends. If not a very studious man, or a leading politician, he devoted the evening to conversation and music, either in his family circle, or among his friends. In the former case, he went to bed early; in the latter he was often up all night, and sometimes went from his first feast in company with his noisy friends to knock up other banqueters and enjoy their hospitality unasked. There were no clubs or public houses open at night in the old Greek towns. It should be added that

the hours of meals got gradually later, as luxury advanced.

The dress of a Greek gentleman was simple both in form and color. He wore a shirt or under garment of wool called chiton, without sleeves, and drawn tight with a girdle round the waist. As luxury increased, the Athenians adopted linen instead of wool, the Ionians wore the chiton down to the feet, and sleeves were frequently added. Trousers were also considered a foreign dress. Over the chiton was thrown a large cloak shaped something like a Scotch shawl, but squarer, which was wrapped about the figure so as to have only the right shoulder and head free. This was regarded as the principal garment, for while it was not thought polite to throw it open, and a man without it, though in his chiton, was called stripped, on the other hand a man wrapped in his cloak without any under garment was thought perfectly dressed. Most of the portrait statues of celebrated men which have reached us are indeed represented in this very way. White was the full dress color for both garments, but other colors, especially various shades of red, dark blue, and green, were not unfrequently worn.

The cloak was also doubled, when men were actively employed, and fastened on the shoulder with a clasp or pin. This was done in imitation of the smaller but thicker cloaks, some of which were of semicircular shape, and borrowed from Macedonia. These were worn in war and on journeys. As to head dress, the Greeks seem to have usually gone about their cities bareheaded. In case of bad weather, they put on a fur or leather cap fitting closely to the head, and this was commonly worn by slaves. They also used in traveling, to keep off the sun's heat, broad-brimmed felt hats, very like our "wide-awakes" in form. They were often barefooted, but also wore ornamented slippers at home, and in the streets sandals strapped with elegant thongs. In hunting or war, buskins of various kinds, reaching high on the leg, were adopted. If we add a walking stick, which up to the time of Demosthenes was even obligatory at Athens, and was always carried at Sparta, and a seal ring, we complete our picture of the Greek gentleman's dress. In Socrates' day a tunic cost ten drachmæ, a cloak sixteen to twenty, a pair of shoes eight. Lower class people, such as farm laborers and slaves, wore the inner garment alone, but with sleeves, or (in the country) clothed themselves in tanned skins. The general colors of a Greek crowd must have been a dull woollen white, relieved with patches of crimson and dark greens and blues.

GREEK MYTHOLOGY.

Before introducing, as is proposed, condensed excerpts from our available sources of information on Greek Mythology, it may be important for a large class of readers to define the term, and also to show some of the advantages arising from well directed mythological studies.

Mythology is a compound Greek word, meaning the science of—or, more literally, discourse respecting—myths. What is a myth? No exact definition of the word can be given, because there are many varieties of myths, and the term has been used in several distinct senses. In the New Testament it occurs five times, and is in every instance used in an evil, or severely disparaging sense. In our English version it is translated "fables," not such as have been invented to convey and illustrate the truth, but cunningly devised fictions, used to convey ethical notions in themselves false. No such condemnation can be pronounced against the Grecian myths in general, many of which, like those of Plato, are charming figurative representations of important ideas, the splendidly imaginative embodiment of subjective truths, and, like the inimitable parables of our Lord, claim no credence for themselves, only as media for conveying the lessons taught. Such myths are not only free

from any just reproach, but are commended, as a proper and effective method of teaching, analagous to allegories, fables and parables, and often found in the writings of the wisest and best of mankind. If in this way falsehood has been embellished, we may repudiate their false doctrines, though we admire the mythological dress in which they are presented.

Conscious that the best verbal definitions that can be given fail to define or precisely indicate the generally accepted character of the Grecian myth, we unconsciously multiply words and amplify their meanings, till the attempt becomes rather descriptive than definitive. Others, however acute and discerning, have had the same difficulty. In his attempt to tell us just what a myth is, Dr. McClintock says: "It is best described as a spontaneous product of the youthful imagination of mankind—the natural form under which the infant race expressed its conceptions and convictions about supernatural relations, and prehistoric events. It is neither fiction, ordinary history, nor philosophy; it is a spoken poetry, an uncritical and child-like history, a sincere and self-believing romance. It does not invent, but simply imagines and repeats; it may err, but it never lies. It is a narration, generally marvel-

ous, which no one consciously or scientifically invents, and which every one unintentionally falsifies." "It is," says Mr. Grote, "the natural effusion of the unlettered, imaginative, believing man." "It belongs to an age in which the mind was credulous, or confiding, the imagination full of vigor and vivacity, the passions earnest and intense. Its very essence consists in the projection of thought into the sphere of facts; and it arises partly from the unconscious and gradual objectizing of the subjective, or the confusing of mental processes with external realities; that is, from imaginatively attributing to external nature the feelings and qualities which exist only in the percipient soul."

Myths, then, belong to that period of human progress in which the untaught mind regards "history as all a fairy tale." Before the dawn of science, and the increase of knowledge by the general dissemination of books, men's fancies respecting the past, and the uncertain conjectures of their nascent philosophy could be preserved only by these traditional and semi-poetical tales of the mythologists. To borrow the fine expression of Tacitus—*Fingunt simul creduntque*—"They at once fabricate and believe."

"The real and the ideal," again says Mr. Grote, "were blended together in the primitive conceptions. * * * The myth passed unquestioned from the fact of its currency, and its harmony with existing sentiments and preconceptions." So to the intensity of a fresh, undisciplined imagination, and the paucity of terms in the language yet in its extreme adolescence, the origin of a vast number of myths can easily be traced. "In those early days men looked at all things with the large open eyes of childish wonderment, and much of what they saw was incapable of any other than a metaphorical description at their hands. They had no words for the purpose, and if the language had been richer it would have responded less accurately to their thoughts, since they transferred their own feelings and sentiments to the world about them, and made themselves the measure of all things." "Thus," says one, "the hunter regarded the moon which glanced rapidly along the clouded heavens, as a beaming goddess with her nymphs," and

Sunbeams upon distant hills,
Gilding space with shadows in their train,
Might, with small help from fancy, be transferred
Into fleet Oreads, sporting visibly.—*Wordsworth*.

Among a race of unlettered, but intellectually active, stalwart men, on whose path science shed but a dim, uncertain light, even natural phenomena so imperfectly understood, and many things in the realm of the spiritual and unseen being imaginatively conceived, and described in metaphors, myths must abound. Nor is it wonderful that those belonging to a remote prehistoric age are sometimes shrouded in a veil of impenetrable mystery.

We may not be able to reach their true meaning, since when personifications are so manifold, it is often impossible for us to tell just what was regarded as fancy and what was believed to be fact. It is worthy of remark that the same is as true of the grotesque incredible legends current among semi-barbarian tribes at the present day, as in the earliest Grecian myths. In many of them there is a substratum of facts, of which there was some rather shadowy knowledge; after some progress, and the introduction of letters among them, their guesses and imaginings that were uttered in metaphorical expressions not fully understood, are in a manner evaporated, or crystallize into dogmas that are accepted as parts of the tribal faith.

So the more ancient narratives, that are called mythological, as we will hereafter see, when collected, systematized and written by masters in the art, have a value not only as indicating the incipient, though imperfect development of the race, but in most cases, after the winnowing processes applied have driven away the chaff, some kernels of truth will remain, more than

enough to repay those who mostly study them as interesting relics of a primitive society, the earnest, impassioned deliverances of nature's children, yet unsophisticated by "philosophy falsely so called."

We will a little further extend, and corroborate these views by another quotation from a high authority on the subject.

"Myths," he says, "are figurative representations of events or ideas in the garb of history; they develop themselves spontaneously, and unartificially in the consciousness of a primitive people; instead of being products of design and invention, they symbolize the forces of nature under whose influence they are formed, and have an essentially religious character."

The same authority further says: "The myth proceeds from an idea, either true or false; the legend proceeds from facts, more or less clearly apprehended, in which the idea was discovered. The one transforms poetry, religion or philosophy into history; the other modifies history with reference to conceptions of poetry, religion and philosophy."

All persons interested in classical studies, and having given much attention to comparative philology, find in the early history of mankind an age in which words were very few—mostly names of things, and not used to express abstract ideas, or any other than those things necessary to the simplest modes of life. As words increased in number, some were introduced expressive of qualities, relations and acts. They are found variously related, phrases and brief sentences appear, the language becomes organic, and the first elements of its grammar are discovered.

In a second period, as in the Aryan and Semetic tongues, language is found advanced to a more systematic, grammatical development, and invites us to a more critical study and analysis of its forms. As yet there were neither abstract nor collective nouns, and every name designated a definite individual object. All these names of things had terminations suggestive of sex. Neuter nouns were yet unknown. Of course it was impossible for them to speak of any object, though inanimate, without ascribing to it something of an active, individual, sexual, personal character; and for this reason, if for no other, personification is a special characteristic of all languages in their earlier stages of development, and it is found to have a close correspondence with the mythical conceptions in the development of thought in those remote ages. There was then nothing prosaic in men's thinking or speaking. Their language was a kind of unconscious poetry, every word a poem, every phrase embracing the germs of something metaphorical, or sparkling with the scintillations of some bright conceptions. Verbs, too, were strongly expressive of the mind's various moods and emotions, and needed few auxiliaries that are employed in more abstract prose. Thus sunset was described as the sun growing old, decaying, dying; the sunrise as night giving birth to a brilliant, beautiful child. Spring was Sol greeting the happy earth with a warm embrace, and showering his treasures into the lap of nature. Rivers, fountains, grottoes, forests, mountains, rain, storm, the ocean, fire, thunder clouds and the heavenly bodies were all clothed with the attributes of living beings, and all descriptions of them were myths.

Volumes have been written, and much more might here be said explanatory of the general subject, and to remove prejudice against mythological studies as useless or misleading in their tendency.

Some well meaning persons ask how Christians who know the truth and rejoice in it can be either pleased or profited by communing with the thoughts or fancies of those on whom the sun did not shine, and who had none to lead them.

It is important for all such to distinguish the point of view in which mythological narratives were contemplated by the ancients, by mythologists themselves, and that in which we are to regard them. To them they were in many respects realities closely connected with their national history and their relig-

ious faith. To us they are unreal, but affording evidence of the little nature taught them or that was acquired by merely intellectual processes, and their evident, but often vaguely felt, need of supernatural manifestations.

Classical study and literature are regarded as so important in education, and a knowledge of Greek mythology is so obviously necessary to a full understanding of the best Greek authors, that many works have been published on the subject. The writers have either merely stated the fables as reported among the ancients, or in addition have sought to trace them to their origin, either by making conjectures of allegorical, historical and physical meanings in the stories, or deriving them from the events of the early ages, recorded in the Bible. But as these traditions themselves arose in various ways, and often accidentally, there of course must be error in every system which attempts to refer them to a common cause and purpose.

The foundation of very many of the fictions of mythology is laid in ideas that arose from the simplicity and inexperience of persons conversant only with objects of sense. Wherever an unusual fact or appearance was observed it was ascribed to a distinct being or existence, operating directly or immediately. This creation by them of personal existences out of natural phenomena, this ever ready personification of physical objects and events, was, in all probability, one of the most fruitful sources of fable and of idolatry, for which the stars and the elements seem to have furnished the most common occasion.

"One source of fable," says an able writer, "is the *perversion or alteration of facts* in sacred history; and indeed this is its earliest and principal source. The family of Noah, perfectly instructed by him in religious matters, preserved for a considerable time the worship of the true God in all its purity. But when the members of this family were separated and scattered over different countries, diversity of language and abode was soon followed by a change of worship. Truth, which had hitherto been intrusted to the single channel of oral communication, subject to a thousand variations, and which had not yet become fixed by the use of writing, that surer guardian of facts, became obscured by an infinite number of fables which greatly increased the darkness that had enveloped it."

The advantages of an acquaintance with mythology are many. They have been admirably shown by Rollin, from whom we quote:

1. It apprises us how much we are indebted to Jesus Christ the Savior, who had rescued us from the power of darkness and introduced

us into the wonderful light of the Gospel. Before his time what was the real character of men? Even the wisest and most upright men—those celebrated philosophers, those great politicians, those renowned legislators of Greece, those grave senators of Rome? In a word, what were all the nations of the world, the most polished and the most enlightened? Fable informs us they were the blind worshipers of some demon, and bowed the knee before gods of gold, silver and marble. They offered incense and prayers to statues, deaf and mute. They recognized as gods animals, reptiles, and even plants. They did not blush to adore an adulterous Mars, a prostituted Venus, an incestuous Juno, a Jupiter blackened by every kind of crime, and worthy for that reason to hold the first rank among the gods. See what our fathers were, and what we ourselves should have been, had not the light of the Gospel dissipated our darkness! Each story in fable, every circumstance in the life of the gods, ought at once to fill us with confusion, admiration and gratitude.

2. Another advantage from the study of fable is that, by discovering to us the absurd ceremonies and impious maxims of paganism, it may inspire us with new respect for the majesty of the Christian religion, and for the sanctity of its morals. Ecclesiastical history informs us that a Christian bishop (Theophilus of Alexandria), to render idolatry odious in the minds of the faithful, brought forth to the light and exposed to the eyes of the public, all which was found in the interior of a temple that had been demolished; bones of men, limbs of infants immolated to demons, and many other vestiges of the sacrilegious worship which pagans render to their deities. This is nearly the effect which the study of fable must produce on the mind of every sensible person; and this is the use to which it has been put by the holy fathers and all the defenders of the Christian religion. The great work of St. Augustin, entitled "The City of God," which has conferred such honor upon the Church, is at the same time a proof of what I now advance, and a perfect model of the manner in which profane studies ought to be sanctified.

3. Still another benefit of great importance may be realized in the understanding of authors either in Greek, Latin, or even French, in reading which a person is often stopped short if ignorant of mythology. I speak now of the poets, merely, whose natural language is fable; it is often employed also by orators, and it furnishes them frequently with the happiest illustrations, and with strains the most sprightly and eloquent.

4. There is another class of works whose meaning and beauty are illustrated by a knowledge of fable, viz., paintings, coins, statues, and the like. These are so many enigmas to persons ignorant of mythology, which is often the only key to their interpretation.

TEMPERANCE TEACHINGS OF SCIENCE; OR, THE POISON PROBLEM.

BY FELIX L. OSWALD, M.D.

CHAPTER I.—THE SECRET OF THE ALCOHOL HABIT.

"Consistency is the Test of Truth."—WILBERFORCE.

Among the strange legends of the Middle Ages there are certain traditions which have evidently a figurative significance, and whose origin has often been traced to the allegorical mythology of an earlier age. An allegory of that sort is the legend of the "Marvel of Nikolsburg," near Vienna; a miraculous image that appeared always an inch higher than the person standing before it. "It overtopped a giant, and all but condescended to the stature of a dwarf," says the tradition.

That image is a symbol of nature. The lowest savage must dimly recognize the fact that man can not measure his cunning against the wisdom of the Creator, and the highest development of science has only revealed its own incompetence to imitate, or even comprehend, the structural perfection of the

simplest living organism. The Author of life deals only in masterpieces; the marvelous fitness of his contrivances is as infinite in his smallest as in his greatest works, and the apparent exceptions from that rule can nearly all be traced to the influence of abnormal circumstances. Our own interference with the order of nature has caused the discords in the harmony of creation which furnish the chief arguments of pessimism. The winter torrents which devastate the valleys of southern France with a fury which Condorcet calls the "truculence of a vainly worshiped heaven," flowed in harmless brooks till the hand of man destroyed the protecting forests that absorbed and equalized the drainage of the Alpine slopes, the same imprudence has turned the gardens of the East into deserts and obstructed with sandbars the channels of once navigable rivers. The wanton extermination of woodbirds has revenged itself by insect plagues. Consumption, that cruel scourge of the human race, is the direct consequence of the

folly which makes us prefer the miasma of our tenement-prisons to the balm of God's free air. We are too apt to confound the results of our sins against nature with the original arrangements of Providence. But the strangest instance of that mistake is the fallacy which has long biased our dealings with the curse of the alcohol habit. Drunkards plead their inability to resist the promptings of an imperious appetite. Their friends lament the antagonism of nature and duty, the weakness of the flesh frustrating the resolves of a willing spirit. Even temperance orators dwell on the dangers of "worldly temptations," of "selfish, sensual indulgences," as if the alcohol habit were the result of an innate propensity—deplorable in its collateral consequences, but withal entitled to the compromising concessions which ascetic virtue owes to the cravings of an impetuous natural instinct. In other words, we palliate a flagrant crime against the physical laws of God, as if nature herself had lured us to our ruin; the votaries of alcohol plead their ignorance, as if the Providence that warns us against the sting of a tiny insect and teaches the eye to protect itself against a mote of dust, had provided no adequate safeguards against the greatest danger to health and happiness.

And yet those safeguards would abundantly answer their protective purpose if persistent vice had not almost deadened the faculty of understanding the monitions of our physical conscience. It is true that the stimulant-thirst of the confirmed drunkard far exceeds the urgency of the most impetuous instincts, but by that very excessiveness and persistence the far-gone development of the alcohol habit proves what the mode of its incipience establishes beyond the possibility of a doubt, namely, the radical difference of its characteristics from those of a natural appetite. For,

1. UNDER NORMAL CIRCUMSTANCES THE ATTRACTIVENESS OF ALIMENTARY SUBSTANCES IS PROPORTIONED TO THE DEGREE OF THEIR HEALTHFULNESS AND THEIR NUTRITIVE VALUE.—To the children of nature all hurtful things are repulsive, all beneficial things attractive. Providence has endowed our species with a liberal share of the protective instinct that teaches our dumb fellow-creatures to select their proper food, and even in this age of far-gone degeneration the dietetic predilections of children and primitive men might furnish the criteria of a general food reform. No creature is misled by an innate craving for unwholesome food, nor by an instinctive aversion to wholesome substances. Our natural repugnance to nearly all kinds of "medicines," *i. e.*, virulent stimulants, has already begun to be recognized as a suggestive illustration of that rule. A child's hankering after sweetmeats is only an apparent exception, for, as Dr. Schrodt observes, the conventional diet of our children is so deficient in saccharine elements that instinct constantly strives to supply an unsatisfied want. Human beings fed chiefly on fruit syrups would instinctively hanker after farinaceous substances. The savages of our northwestern prairies are as fond of honey as their grizzly neighbors. Nurslings, deprived of their mothers' milk, instinctively appreciate the proper component parts of artificial surrogates. Sailors in the tropics thirst after fruit, after refrigerating fluids, after fresh vegetables. In the arctic seas they crave calorific food—oil or fat.

But in no climate of this earth is man afflicted with an instinctive hankering after alcohol. To the palate of an unsecluded boy rum is as repulsive as corrosive sublimate. I do not speak only of the sons of nature-abiding parents, but of the children of vice, left to the guidance of their enfeebled, but not intentionally perverted, instincts. The intuitive bias even of such is in the direction of total abstinence from all noxious stimulants, for nature has willed that all her creatures should begin the pilgrimage of life from beyond the point where the roads of purity and vice diverge. In their projects for the abolition of the stimulant habit, temperance people are, indeed, rather inclined to underrate the difficulties of a total cure of a confirmed poison vice, but equally apt to *overrate the difficulty*

of total prevention. The supposed effects of an innate predisposition can generally be traced to the direct influence of a vicious education. Jean Jacques Rousseau expressed his conviction that a fondness for intoxicating liquors is nearly always contracted in the years of immaturity, when the deference to social precedents is apt to overcome the warnings of instinct, but that those who have escaped or not yielded to the temptations of that period would ever afterward be safe. Dr. Zimmerman, too, admits that "home influences are too often mistaken for hereditary influences." And boy toppers are not always voluntary converts. The year before I left my native town (Brussels), I found a drunken lad on the platform of the railway depot and carried him to the house of a medical friend, who put him to bed and turned him over to a policeman the next morning. The little fellow was recognized as an old offender, but when the court was going to send him to a house of correction my friend offered to take him back, and, on condition of keeping him away from his parents, was permitted to take care of him, and finally made him his office-boy. His parents were ascertained to be both habitual drunkards, but their son (*at. 11*), showed no inclination to follow their example, and voluntarily abstained from the light wines which now and then made their appearance on the doctor's table—though he never missed an opportunity to rejoin his old playmates, and, as his patron expressed it, "was a dangerous deal too smart to be entrusted with the collection of bills." Six months after his last scrape I found him alone in the doctor's office, where he had collected a private library of picture papers and illustrated almanacs. "What made you get so drunk last Easter?" I asked him, "are you so fond of brandy?"

"Nenni, mais Pa m'en fit prendre," he replied—"father made me drink it."

2. THE INSTINCTIVE AVERSION TO ANY KIND OF POISON CAN BE PERVERTED INTO AN UNNATURAL CRAVING AFTER THE SAME SUBSTANCE.—Poisons are either repulsive or insipid. Arsenic, sugar of lead, and antimony, belong to the latter class. To the first-born children of earth certain mineral poisons were decidedly *out of the way substances*, against which nature apparently thought it less necessary to provide special safeguards. But, though less repulsive than other poisons, such substances are never positively attractive, and often (like verdigris, potassium, etc.), perceptibly nauseous. Vegetable poisons are either nauseous or intensely bitter. Hasheesh is more unattractive than turpentine. Opium is acrid caustic. Absinthe (wormwood extract) is as bitter as gall. Instinct resists the incipience of an insidious second nature.

But that instinct is plastic. If the warnings of our physical conscience remain unheeded, if the offensive substance is again and again forced upon the unwilling stomach, nature at last chooses the alternative of compromising the evil, and, true to her supreme law, of preserving existence at any cost, prolongs even a wretched life by adapting the organism to the exigencies of an abnormal habit. She still continues her protest in the feeling of exhaustion which follows every poison-debauch, but permits each following dose of the insidious drug to act as a temporary re-invigorant, or at least as a spur to the functional activity of the exhausted organism, for the apparent return of vital vigor is, in fact, nothing but a symptom of the morbid energy exerted by the system in its efforts to rid itself of a deadly intruder, for each new application of the stimulus is as regularly followed by a distressing reaction. And *only then* the slave of the unnatural habit becomes conscious of that peculiar craving which is entirely distinct from the promptings of a healthy appetite—a craving uncompromisingly directed toward a special—once repulsive—substance, a craving defying the limiting instincts which indicate the proper quantum of wholesome foods and drinks, a craving which each gratification makes more irresistible, though for the time being each indulgence is followed by a depressing reaction. The appetite for wholesome substances—however palatable—is

never exclusive. A child may become passionately fond of ice cream, yet accept cold water and fruit cake as a welcome substitute. A predilection for honey, strawberries, or sweet tree fruits will not tempt the admirers of such dainties to commit forgery and highway robbery to indulge their penchant—as long as their kitchen affords a supply of savory vegetables. Unnatural appetites have no natural limits; but the art of the best pastry cook would hardly induce his customers to stupefy and bestialize themselves with his compounds. There are no milk toppers, no suicidal potato eaters, no victims of a chronic porridge passion. In spite of occasional surfeits the craving for alimentary substances increases and decreases with the needs of the organism, while that of the poison drinker yields only to the temporary extinction of consciousness.

In a state of nature every normal function is associated with a pleasurable sensation, and instead of resulting in agonizing reactions a feast of wholesome food is followed by a state of considerable physical comfort—"the beatific consciousness of perfect digestion," as Baron Brisse describes the pleasures of the after dinner hour. But no length of practice will ever save the poison slave from the penalties of his sins against nature. Each full indulgence is followed by a full measure of woful retributions, while a half indulgence results in a half depression to the verge of world-weary despondency, or fails to satisfy the lingering thirst after a larger dose of the same stimulant. And every poison known to modern chemistry can beget that specific craving. "Entirely accidental circumstances, the accessibility of special drugs, imitiveness and the intercourse of commercial nations, the mere whims of fashion, the authority of medical recommendations, have often decided the first choice of a special stimulant, destined to become a national beverage" and a national curse. The contemporaries of the Veda writers fuddled with *soma-wine*, the juice of a narcotic plant of the Himalaya foothills. Their neighbors, the pastoral Tartars, get drunk on *Koumiss*, or fermented mare's milk, an abomination which in Eastern Europe threatens to increase the list of imported poisons, while opium is gaining ground in our Pacific States as fast as lager beer, chloral and patent "biters" on the Atlantic slope. The French have added *absinthe* to their wines and liquors, the Turks *hasheesh* and opiates to strong coffee. North America has adopted tea from China, coffee from Arabia (or originally from Ceylon), tobacco from the Caribbean savages, highwines from France and Spain, and may possibly learn to drink Mexican aloe-sap, or chew the coca leaves of the South American Indians. *Arsenic* has its votaries in the southern Alps. *Cinabar* and *acetate of copper* victimize the miners of the Peruvian Sierras. The Ashantees are so fond of *sorghum beer* that their chieftains have to keep special bamboo cages for the benefit of quarrelsome drunkards. The pastor of a Swiss colony in the Mexican State of Oaxaca told me that the mountaineers of that neighborhood befuddle themselves with *cicuta syrup*, the inspissated juice of a kind of *hemlock* that first excites and then depresses the cerebral functions, excessive garrulity being the principal symptom of the exalted stage of intoxication. A decoction of the common *fly toadstool* (*agaricus maculatus*) inflames the passions of the Kamschatka natives, makes them pugnacious, disputative, but eventually splenetic (Chamisso's "*Reisen*," p. 322). The Abyssinians use a preparation of *dhurra-corn* that causes more quarrels than gambling. It is a favorite beverage at festivals, and is vaunted as a remedy for various complaints, though Belzoni mentions that it makes its votaries more subject to the attacks of the Nile fever. According to Professor Vamberg, the Syrian Druses pray, though apparently in vain, to be delivered from the temptation of *foxglove tea*. Comparative pathology has multiplied these analogies till, in spite of the arguments of a thousand specious advocates, there is no valid reason to doubt that the alleged innate craving for the stimulus of fermented or distilled beverages is *wholly abnormal*, and that *the alcohol habit is characterized by all the peculiarities of a poison vice*.

3. ALL POISON HABITS ARE PROGRESSIVE.—There is a deep significance in that term of our language which describes an unnatural habit as *growing upon* its devotees, for we find, indeed, a striking analogy between the development of the stimulant habit and that of a parasitical plant, which, sprouting from tiny seeds, fastens upon, preys upon, and at last strangles its victims. The seductiveness of every stimulant habit gains strength with each new indulgence, and it is a curious fact that that power is proportioned to the original repulsiveness of the poison. The tonic influence of Chinese tea is due to the presence of a stimulating ingredient known as *theine*, in its concentrated form a strong narcotic poison, but forming only a minute percentage of the component parts of common green tea. On the Pacific coast of our country thousands of Chinese immigrants carry their thrift to the degree of renouncing their favorite beverage, but neither considerations of economy nor of self-preservation will induce the same exiles to break the fetters of the opium habit. Not one hasheesh-eater in a hundred can hope to emancipate himself from the thralldom of his vice. The guests of King Alcohol, too, would make their reckoning without their host in hoping to take in the fun of intoxication as a votary of pleasure would engage in a transient pastime: his palace is an Armida castle, that rarely dismisses a visitor.

"In describing the effects of the alcohol habit," says Dr. Isaac Jennings, "I want to impress the reader with another feature of it—its perpetuity. It can never be put off during the lifetime of the individual; it may be covered up to appearance, but it can not be effaced. . . . It seems to be a common impression that alcohol circulates through the body, excites the action of the heart and liver, quickens and enlivens the animal spirits, and then passes off, and leaves no trace of its visitation, or at most only a temporary loss of power, which is soon restored by a self-moved power pump. This is a great and fundamental error. Every drop of alcohol that enters the stomach inflicts an injury that will continue as long as the old stock lasts, and reach even to the young sprouts. It may not be estampé on them in precisely the same way, but it will affect essentially the same parts." ("Medical Reform," pp. 173-175.)

"If a man was sent to hell," says Dr. Rush, "and kept there for a thousand years as a punishment for drinking, and then returned, his first cry would be, 'Give me rum, give me rum!'"

"The infernal powers blindfold the victims of their altars," says Lessing, and the stimulant vice seems, in fact, to weaken not only the physical constitution of its votaries, but their moral power of resistance, and often even the faculty of realizing the perils of their practice, as if the poison had struck its roots into the very souls of its victims.

But the alcohol habit grows outward, as well as inward. We have seen that each gratification of the poison vice is followed by a depressing reaction. But his feeling of exhaustion is steadily progressive, and the correspondingly increased craving for a repetition of the stimulant dose forces its victim *either to increase the quantity of the wonted tonic, or else to resort to a stronger poison*. The experience of individual drunkards probably corresponds to the international development of the alcohol habit. Its first devotees contented themselves with moderate quantities of the milder stimulants: must, hydromel and light beer. But such tonics soon began to pall, and the jaded appetite of the toper soon resorted to strong wines, to hard cider, and finally to brandy and rum. Others increased the quantity, and learned to drink horse-pails full of beer, in which "diluted and harmless form" many German students manage to absorb a quart of alcohol per day.

"People sometimes wonder," says Dr. Jennings, "why such and such men, possessing great intellectual power and firmness of character in other respects, can not drink moderately and not give themselves up to drunkenness. They become drunkards by law—fixed, immutable law. Let a man with a constitution as perfect as Adam's undertake to drink alcohol, moder-

ately and perseveringly, with all the caution and deliberate determination that he can command, and if he could live long enough he would just as certainly become a drunkard—get to a point where he could not refrain from drinking to excess—as he would go over Niagara Falls when placed in a canoe in the river above the falls and left to the natural operation of the current. And proportionally as he descended the stream would his alcoholic attraction for it increase, so that he would find it more and more difficult to get ashore, until he reached a point where escape was impossible.” (“Medical Reform,” p. 176.)

Now and then the votaries of the stimulant habit exchange their tonic for a stronger poison. Claude Bernard, the famous French pathologist, noticed that the opium vice recruits its female victims chiefly from the ranks of the veteran coffee drinkers. In Turkey, too, strong coffee has prepared the way for tobacco and opium; in Switzerland arsenic eaters have exchanged their kirschwasser for a more potent tonic; many French and Russian hard drinkers have learned to prefer ether to brandy.

But no poison vice can be cured by milder stimulants. The Beelzebub of alcohol does not yield to weaker spirits; hence the fallacy of the *antidote plan*. Nothing was formerly more common with temperance people of the compromise school than to comfort converted drunkards with stimulating drugs and strong coffee, in the hope that the organism might somehow be induced to acquiesce in the *quid pro quo*. That hope is a delusion. The surrogate may bring a temporary relief, but it can not satisfy the thirst for the stronger tonic, and only serves to *perpetuate the stimulant diathesis*—the poison hunger which will sooner or later revert to the wonted object of its

passion. Unswerving loyalty to the pledge of the total abstinence plan is not at first the easiest, but eventually the surest way. For even after weeks of successful resistance to the importunities of the tempter, a mere spark may rekindle the smothered flames. “What takes place in the stomach of a reformed drunkard?” says Dr. Sewall—“the individual who abandons the use of all intoxicating drinks? The stomach by that extraordinary self-restorative power of nature gradually resumes its natural appearance. Its engorged blood-vessels become reduced to their original size, and a few weeks or months will accomplish this renovation, after which the individual has no longer any suffering or desire for alcohol. It is nevertheless true, and should ever be borne in mind, that such is the sensibility of the stomach of the reformed drunkard that a repetition of the use of alcohol, *in the slightest degree, and in any form, under any circumstances*, revives the appetite; the blood vessels again become dilated, and the morbid sensibility of the organ is reproduced.”

The use of any stimulating drug may awaken the dormant propensity, and it will not change the result if the stimulant has been administered in the form of a medical prescription. Strong drink is a mocker, in disease as well as in health, and the road to the rum shop leads through the dispensary as often as through the beer garden.

The logical conclusion of all these premises thus reveals the two-fold secret of the alcohol habit: *the anomaly of its attractiveness and the necessity of its progressiveness*, and we at last recognize the truth that the road to intemperance is paved with mild stimulants, and that the only safe, consistent and effective plan of reform is total abstinence from all stimulating poisons.

A TRIP TO THE YOSEMITE.

BY MISS FRANCES E. WILLARD,
President of W. C. T. U.

The famous San Joaquin Valley is as large as the State of Ohio. It opens into the Sacramento Valley, and the two are about six hundred miles long. A plow could go the length of both and never touch a stone. In the San Joaquin they have a ranche where the gang plow starts in the morning, goes on a straight line all day, turns back and plows its twin furrow the next, having thus retraversed the length of one California farm.

It was through seven hours by rail of this valley that we went, in a southeasterly direction, from San Francisco to Madera, where two coaches were waiting to carry us over the one hundred miles in a northeasterly direction that still separated us from the wonderland ruled by “El Capitan.” There were twenty-three of us, and “none smoked or chewed, or drank or swore,” as I was credibly informed by our “El Capitan,” the Rev. Dr. Briggs. By the way, if Chautauqua wants a first class attraction let this name go on the list. We traveled rapidly. I counted thirty different horses on our coach in one day. We killed rattlesnakes, that is, the Dr. did, marching squarely forward and whacking them unmercifully with his stout cane, while we women, securely perched on our high seats in the coach, really enjoyed the sight. We saw horse-shoes enough for wholesale good luck, scattered along the road. We believe, and always shall, that we perceived a bear track, and wondered if it was made by famous “Club Foot Joe”—whose annals are they not in all the Tourist’s Chronicles? We told stories all strictly true. There was no Baron Münchhausen amongst us, though had prosaic Easterners been within ear-shot of our driver they might perhaps have promulgated a different declaration. We did not fear robbers, for “a count” developed the fact that in our coach—chiefly inhabited by ministers, their wives, and sundry visiting philanthropists—gold

watches were the only “plunder,” and these were all inscribed “Presented by” to that degree that no well regulated “road agent” would have wished such a “free advertisement” of his base conduct, as these trophies must have furnished. We sang old songs of the fireside and sanctuary, talked of the Chautauquas east and west, “marked” our favorite trees in “the ample forest of Bishop timber” (to be revealed after next General Conference), and regulated the affairs of the nation generally. We fitted ourselves out with a “local government” administered on the everlasting principles of justice and equality, *i. e.*, we counted the women *in*, not *out*. I copy our rules from the log book of the expedition:

1. Unquestioned submission to constituted authority.
2. Silence when entering the valley.
3. Wives, be obedient to your husbands.—*The Chaplain.*
4. Wives, don't you do it.—*The Chaplain's wife.*
5. Whenever a dispute arises, the vote of every woman shall count two.—*A widower.*
6. Eat dinner often.—*Little Walter Bland.*
7. No one shall be required to speak grammatically on this trip.—*F. E. W.*

All of which were unanimously adopted except the one about “counting two,” which evoked a loud dissent.

The first day we rode seventy-two miles, stopping at Clark's hospitable caravansary, and kindly permitting sweet sleep to knit up the raveled sleeve of care. Decoration Day (May 30th) came next, and with patriotic intent we had made out a program, intending to “celebrate” in the chapel built for Dr. Vincent when he conducted a miniature “Chautauqua Assembly” in the Yosemite a few years since. But when, after a mountain ride of half a day, surrounded by inclined planes of evergreens, each of which would have been a world's wonder,

at the East, with superb curves in the road evermore opening fresh vistas of illimitable height, verdure and beauty, we rounded

INSPIRATION POINT,

"there was no more spirit in us." Nay, rather the spirit of beauty and divinity so possessed us that "plans" and "programs" sunk into oblivion. Word-pauperism oppresses one upon this height as nothing else on earth. There is in Europe a single revelation of art which has power to silence the chatter even of fashion's devotees, and that is Raphael's Sistine Madonna. I have been in its seraphic presence for hours at a time, but never heard a vocal comment. The foamiest natures are not silenced by Niagara, by Mt. Blanc, by the Jungfrau's awful purity, or the terrors of Vesuvius for their flippant tones have smitten me in all these sacred places. But from the little child in our midst—a bright faced boy of four—to the rough, kind hearted driver, not one word was spoken by our party as

THE HEAVENLY VISION

framed in fleecy, flying clouds, greeted our thoughtful eyes and spoke of God to our hushed souls. Except beside the dying bed of my beloved I have never felt the veil so thin between me and the world ineffable—supernal. What was it like? Let no pen less lofty than that of Milton, less attune with nature's purest mood than that of Wordsworth, hope to "express unblamed" the awful and ethereal beauty of what we saw. "Earth with her thousand voices praises God," sang the great heart of Coleridge, from the vale of Chamouni, but here, the divine chorus includes both earth and heaven, for El Capitan rears his head into the sky, Sentinel, Cathedral Rocks and sky-climbing clouds rest while the symphony of eighteen waterfalls rounds out the diapason.

"The rolling year is full of Thee,
Forth in the gentle spring Thy beauty walks,
Thy tenderness and love."

These tuneful words of Thompson's "Seasons" express the milder mood of nature, but who can fitly tell of the condensed impressions about God made by a valley only six miles long, one mile wide, and half a mile high, wherein every form of solemn, majestic and pastoral beauty are combined. A holy awe rested upon us, and tears were in all eyes. At last the sacred silence was broken by a rich voice, beloved by me for many a year, as Mrs. Dr. Bentley lead the "*Gloria in Excelsis*," in which the jubilant soprano harmonized with the melodious bass of humanity's united utterance of praise. "O come, let us worship and bow down, let us kneel before the Lord, our Maker," these inspired words leaped to our lips, and we found that beyond all poets was the fitness of dear old words, our mothers taught us from the book of God, in this supreme moment of our experience. "The Lord is in his holy temple, let all the earth keep silence before Him," "What is man that Thou art mindful of him," "Stand in awe and sin not:" these were the first words that came to us, and I believe we shall be better men and women always for that vision of eternity from which the curtain of mystery was for a moment drawn aside. We learned afterward that as our coaches rolled on into the valley a third rounded "Inspiration Point," and Judge — of Sydney, Ohio, a dear old gentleman, rose to his feet, clasped his hands as if in prayer, and exclaimed "Mercy! mercy! Have I lived seventy-six years that I might see this glory! *God made it all!*" and he lifted up his voice and wept. Such a scene as that is once for a life time.

We saw the valley from an hundred points of view afterward, we waved our good-bye to it a week later from this very point, but the first remains the unmatched view—its like will never greet our eyes again—not in this world.

As we sped onward into the valley one of us said: "I never felt before such pity for the blind."

THE HOSPITALITIES OF NATURE.

BY THE REV. HUGH MACMILLAN, D.D., LL.D., F.R.S.E.

Some objects are repellant and exclusive. They give no shelter or support to any created thing. They suffice for themselves, and stand out clearly defined in their distinct and independent existence. The surface of the snow is barren; the chilly glacier has no communion with the mountain glen through which it passes. The clear, sharp-cut crystal harbors no stain from earth or sky to show its sympathy with the materials out of which it sprang. The marble rock, like the snow, does not invite the green things of the soil around it to share its existence with it, and give to and take from it an element of picturesqueness and beauty.

And yet, as in human society, when social laws overbear private plans, and the social design is fulfilled in spite of selfish opposition, so in nature the substances that seek to exclude others are made to contribute to the general harmony and the beautiful balancing of creation. The very snow is made to be friendly and hospitable, for it nourishes on its stainless bosom a simple, one-celled plant which grows with such rapidity and in such marvelous profusion that it gives to whole fields of polar and alpine snow a deep crimson hue, as if a creature's blood had dyed them. In the shallow parts of water melted on the surface of the glacier by the hot noonday sun may be seen jelly-like masses of vegetation; while under the stones which the rocks around hurl down upon it, as if in anger at its hostility, may be found lively colonies of the small black glacier flea. Nature will not allow this cold, frigid substance to maintain a separate existence; for beside boulders from the rocks, she persists in soiling its surface with dirt-bands and masses of debris from the crumbling mountain-side, so that a

line of demarcation between ice and earth can not be drawn, and the glacier blends with the rest of the mountain; while the sky claims kindred with the deep cerulean blue that shines in the crevasses. Marble, too, takes on the warm golden tint of the sunset, and is stained by time with a russet hue that brings it into partnership with the common rocks, with which all things make friends—the mosses, the lichens, the vines and birds. Even the hardest crystals and precious stones have occasional cavities filled with fluids, which indicate their origin. Nay, so anxious is nature to assimilate every object, that on the thatch of man's lowly cottages she plants her tufted mosses; on the slates of his stately roofs she paints her frescoes of golden lichens; and even on his windows she produces not only the iridescence of age, but also a growth of curious, minute algae. On his dark unsightly cinder-walks, which seem like spots of ink disfiguring nature's fair page, she makes her dandelions to open their sunshine; and on the raw new walls which he builds around his possessions, to separate them from nature's wastes, she spreads her hoary nebulae of vegetation. Man's works are thus made kindred to the earth and the elements; and nature, by her hospitalities, makes them at home in every situation.

Some objects are more hospitable than others. The beech, of all trees, is perhaps the most self-contained. It fills out its trunk so thoroughly; its bark is so hard and stuffed and rounded with its wood, that it has not a rift nor a crevice in which any living thing might find refuge. No moss forms a green tuft upon it; no leafy or shrubby lichen finds a foothold on its smooth bark. And even the crustaceous species that

consist of a mere film of gray matter grow thinner on its hard repellant surface than on the rock itself. They cling so closely that they can not be separated. No botanist would go to the beech expecting to find on its trunk the wealth of lowly plants in which he delights. To the entomologist it is equally uninteresting, the number of insects that frequent it being exceedingly few. Nor is it chosen usually by birds to build their nests on its boughs. Darwin mentions that worms hardly ever make their curious castings under its shade. The ground beneath it nourishes no green grasses, and only its brown mast and polished, three-cornered nuts carpet the soil.

Why is the beech so inhospitable? Why does it thus stand alone, apart from the rest of creation, and proudly maintain its own self-sufficient existence? It is indeed one of the grandest of our forest trees. Nothing can be lovelier than its translucent foliage in spring, making, as Coleridge says, "the level sunshine glimmer with green light." Nothing can be more splendid than its blaze of amber tints lighting up the woodland in autumn like a pillar of fire. Its shade is ample; its leaves are sweet and tender; its nuts pleasant and nutritious. And yet all creatures, with the exception of the pig, which feeds upon its nuts, seem to shun it; and hardly any moss or lichen ornaments its trunk and arms with its quaint jewelry. It stands in the inanimate world of pictures around us as a type of a thoroughly selfish and unsocial nature. Only the lover seeks it to carve upon its smooth, hard bark the name of the beloved one, fondly hoping that it may long retain, clear and sharp as if cut in stone, the cherished inscription. But even this tender secret it refuses to keep; its trunk swells, and the letters become dilated and distorted, and in a few years a new growth smooths out and obliterates the name, without leaving a trace on its callous wood. Perhaps this smoothness and hardness of the bark and wood, as well as the dryness of its shade—for no other woods are so free from damp and so pleasant to walk in as beech woods—may be the reason why it shelters so little dependent life. Even the raindrops refuse to linger about it, and though the sunbeams may play through the green meshes of its transparent foliage and tremble on the lines of silky hairs that project from the margins of its young leaves "like eyelashes from the margin of the eyelid," yet without moisture the light can favor no growth of fern or moss or lichen, which loves a damp atmosphere; and without these lowly plants no insect or bird life can flourish.

Another inhospitable tree is the pine. Its degree of selfishness varies with the species, some being much more tolerant of alien life than others; the common larch being, perhaps, the least exclusive, and the *aurucaria* the most. The trunk and branches of the larch are covered from head to foot with tufts and rosettes of hoary lichens, which cling specially to this tree and give it a most venerable appearance; but the *aurucaria* surrounds itself with an impenetrable armor of vegetable spears and daggers, within whose formidable circle no living thing dare intrude. I once saw a squirrel skipping along a lawn, and suddenly stopping at the foot of a tall, wide spreading *aurucaria*, it looked up at the bristling trunk and branches with evident astonishment, as if it had never seen anything of the kind before; and with an expression of disappointment and fear that was almost human, and certainly was exceedingly comical, it turned away and climbed up a more propitious looking species of pine near at hand. But whatever may be the case in regard to individual trees, the pine tribe in its social character is decidedly inhospitable. A pine wood is one of the loneliest scenes in nature, not merely as regards the intrusion of man, but as regards the intrusion of any other living thing. Nothing breaks up its uniformity and monotony. It has none of the rich variety of life that characterizes other woods. The seasons themselves make no impression upon it, for it is dressed in perennial green, and it retains its shade alike in summer's heat and winter's desolation. It prevents all undergrowth; no brambles dare to stretch their long, trailing, thorny arms—

like the feelers of some creature of prey—within its guarded enclosure. No wild roses can open their trembling petals white with fear, or crimson with blushes, in its solemn sanctuary. No hazel bush will drop there its ringlets of smoking catkins in spring, or its ruddy clusters of nuts in autumn. No mimic sunshine of primrose tufts, no pale star-beams of anemone or sorrel will light up its gloom. No glimpses of blue sky are let into it by hyacinths, or bluebells, or violets. To all the lowly plants that find refuge in other woods, and in turn adorn and beautify their hosts, the pine trees in their dignified independence refuse admission. No song of bird or hum of insect is heard beneath their boughs. And on the ground below, strewn deep with a carpet of brown needles and emptied cones that have silently dropped in the course of long years from overhead, and are slow to decay, only a few yellow toadstools and one or two splendid scarlet mushrooms make up for the painful dearth of vegetation. It seems as if the balsamic breath of the pines, which is so wholesome to human life—guarding off all fevers and infectious diseases—were as deadly as the upas shade to other forms of life.

How widely different is it with the oak! This of all trees—of all living things—is the most hospitable; and in this respect it is well chosen as the badge of England, which has the proud distinction of affording a refuge to every political outcast and victim of ecclesiastical tyranny throughout the world, and fosters by its love of freedom and constitutional government, every type and variety of human life. A whole book might easily be written upon the multitude of living things that obtain food and shelter from the oak. The natural history of its inmates and boarders is like that of a garden, or, indeed, a county. Some creatures are peculiar to it, and find their home nowhere else; and to many more that are free to come and go, it extends a kindly welcome. Were it to perish altogether from off the face of the earth, many insects and plants would disappear utterly. The insect population alone of the oak tree, including beetles, butterflies, and a great variety of tiny creeping things which none but a naturalist cares for, or is aware of, would furnish materials for study of a most interesting and absorbing kind for many summer weeks together. When we do not see themselves, we see the evidence of the existence and working of the insects in the great variety of curious galls which they produce upon the trunk and branches: oak apples that hang on the twigs like some mysterious unknown fruit, and are as wondrously fashioned, although excrescences and abortions of the vital sap, as the legitimate acorn cups and eggs themselves; and beautiful golden-brown spangles that crowd all the under-surface of the withering leaves in autumn like the seeds, or the "fairy's money," as it is called, on the back of the ferns, thus linking the oak leaf and the fern leaf—the highest and the lowest type of vegetation—together in the wondrous unity of nature by a strange similitude of appearance. But it is among the plants that we find the most beautiful occupants of the oak tree. The ivy climbs up its trunk, which affords admirable support for its myriads of little feet, and changes its glossy leaves, as it creeps higher and higher, from the deeply-cut angular pattern to the oval and pointed one; and at the top it waves its airy sprays among the oak leaves, and produces beside the acorns at the extremities of the branches, the light-green flowers that blossom only when the plant has nothing to cling to and must shift for itself; as if nature were taking care that when the life of the individual was in danger, the life of the race should at least be made sure. Then there is the mystic mistletoe, with all its dim and sacred associations with the Druid-worship of our remote ancestors. It clings still closer to the oak, for it is not an epiphyte like the ivy—merely making use of the tree for support—and finding its food independently from the soil and air—but a partial parasite that strikes its root into the substance of the oak, and while to some extent feeding upon its prepared juices, is capable of showing a little independent spirit and working for its

own support, as is evident from the fact of its having green leaves, which, however pale, can still decompose, to some extent, the sunshine into materials of growth. The mistletoe is thus a partial boarder of the oak; it gets, so to speak, its principal meal from it, while for its lighter refreshment it is dependent upon its own resources. A beautiful emblem truly it is, thus growing on our royal English tree. According to the suggestive mythology of our ancestors, which had, indeed, much in it of the deeply philosophical, as well as of the practical and religious, the oak was Hesus, the god best and greatest, strongest and ever-during; and the mistletoe was man weak and poor, but living in him and clinging to his everlasting arms.

It would be almost impossible to enumerate the various kinds of mosses, lichens, and ferns, that show a preference for the oak, and share its grand and liberal hospitality. Its trunk seems as if made to harbor those lowly lilliputian members of the vegetable kingdom, whose quaint forms and curious properties harmonize so well with the fairy scenery of midsummer night's dreams. Unlike the smooth bark of the beech, made to keep all visitors aloof, the bark of the oak is full of furrows, crevices, irregularities, porches and outbuildings as it were, where wandering seeds find lodgement, and first tender growths can secure their hold against scorching sunbeam and cruel wind. The huge patriarch, hoary with years, whose lifetime bridges across the whole history of England, allows the tiny imps of vegetation that are but of yesterday—the perpetual infants, so to speak, of plant life—freely to clamber over its roots and arms, and hang upon its rugged bosses which time has used so cruelly, reducing them almost to bone and muscle, their em-

erald bracelets of moss, their plumes of polypody ferns, and their rosettes of lichen, adorning the magnificent old grandfather of the woods with the ornaments of youth and beauty! What a wonderful picturesqueness do these lowly forms of life, crowding around the oak as it grows in years and in size, give to it! They richly repay the hospitality they receive in the added charm they impart to the forest patriarch. They show an exquisite sympathy even with its weaknesses, hiding its defects by their fairy sprays, and covering its dead members with a lovely pall of vegetable velvet.

It teaches us thus the touching lesson that the grandest things in nature may be made more beautiful and picturesque by the simplest—as the greatest man may be indebted for his chief happiness to the smiles and prattle of the little children that climb on his knee. And how open to all the flowers and shrubs of the wild wood are its wide-spreading arms! The grass may grow up to the very foot of its trunk unproved by any dark frowning shadow cast by its leaves. The hyacinth may make a fragrant mist of blue about its roots, and the primrose need not blanch its sunny cheek as it creeps up to its venerable bole. Royal as it is, its dignity consists in its hospitality; and its nobility is indicated by its freeness of access and kindly generous welcome to all that may hold within it the sacred principle of life. The gates of its hospitality, like the Bukharian nobleman's, are "nailed open." Sturdy and independent as it is, there is thus no object that is more closely linked with the genial life of nature, that blends more harmoniously with the operations which different creatures carry on for their own advantage, and makes of them one genial system of mutual benefit.—*London Sunday Magazine.*

PERPLEXITIES.

"Nothing can possibly fail, because the sole true end or object is redemption of man; and this is attained ever and for ever, with no exception, in good and evil, in each largest and most trivial thing."—JAMES HINTON.

How crooked is our life! Its ins and outs
We can not scan;
How often do we say, "That's just too late
And spoils our plan."
How often we perplex ourselves, because
Of efforts vain,
And try, without success, to make things come
Round right again.

How disappointment will not let us hold
The course we would,
But throws us off from every hoped-for boon
That we think good.
How little things perplex our onward path
From day to day,
Seeming to render futile all our work,
Stopping our way.

Oh! could this crooked life be straightened out,
And every bit
Met fairly by another, point to point
In sequence fit;
The difficulties then were not so hard
To meet and bear,
Were there a carrying on of some wise plan,
And purpose fair.

What if the Master's plan *be* utter good,
Too vast, in sooth,
For us to grasp it with our puny powers?
In this grand truth,
For such it is—although things look not so
To our weak sight—
Lies the true meaning of these crooked things
If read aright.

The source of all the discord that we feel,
Is that our will
Is not made one with God's, and so we strive
To make life still
A thing that we call good—a little good
That we can know;
Instead of in our ignorance content
God's way to go.

CASTLE GARDEN.

BY C. E. BISHOP.

A song was popular about forty years ago, in which was couched an invitation to every nation to come along and make no delay, as "Uncle Sam is rich enough to give you all a farm." At Castle Garden, since that invitation, respondent aliens to the number of over seven and a half million have "come along," and Uncle Sam has redeemed the promise to all who applied. Yet, munificent as is this bounty, the State of New York bestows a more liberal hospitality, and a more beneficent care on the immigrant. During a discussion in a New York club lately of the question "What does this country owe to other nations?" a gentleman vehemently protested against the assumption couched in the question. "When a subject of another nation lands on our shores," he said, "we meet him with food and raiment, find him occupation, and give him a farm. Talk about our owing other people anything! The obligation is all on the other side."

The speaker did not half recite the obligation that the Empire State assumes on behalf of the stranger. It reaches out arms of protection to him, like a mother yearning across seas, almost from the time he sets sail. It meets the ship at the Lower Bay of New York, inspects its sanitary condition and that of the passenger; hears his complaints, and if he have any grievance, tries to remedy it. It receives him at Castle Garden, helps him to secure and check his baggage and buy a passage ticket to any point at lowest rates. It gives him his mail, if he have any waiting; telegraphs or writes the news of his arrival to his friends, if he have any in this country, and sends him and his baggage to them if his destination be in or near the city. It gives him food if he be hungry; medicine and nursing if he be ill; a Bible if he can read; sends him to an asylum, if he be *non compos mentis*, or back to Europe if he be a pauper. It changes his foreign coin into American on terms of equal value, and gives him a piece of paper with the whole transaction figured out so he can ponder over it and come back for explanations or corrections, if need be. It finds him a hotel, if he want one, the proprietor of which is under heavy bonds to kindly entreat the stranger and not overcharge him; it stands guard with big clubs to keep off biped wolves, and if, notwithstanding, in the exercise of his new-found liberty, he walk into pitfalls, it sends a detective or a policeman to secure him restitution. It finds him immediate occupation at prices that sound fabulous by the side of his old-time pittance; it furnishes interpreters, guides and guardians—in a word, exercises over him a wiser and more helpful paternalism of government than he has ever known. And all this paternal care it extends to him not only when he arrives; it stands ready to renew the guardianship at any time within a year thereafter if he return to Castle Garden and ask it. Most of this it does without charge to the immigrant; all of it is free if he have no money to pay withal. Not so much is done for any other visitor—not even for the titled and wealthy stranger. Nay, the opera singer or the champion pugilist receives less consideration. Really, the only "distinguished arrivals" in this country are the steerage passengers.

The State of New York stands guardian to the whole United States in this matter. Its little timely aid and provision of employment, its security extended to those destined inland, as well as the care it takes to prohibit entirely the landing of paupers and helpless ones, prevent many from becoming a public expense in other states.

Perhaps you are ready to give it credit, in all this, for Christian philanthropy. Not at all. It is enlightened self-interest on the part of the State. She is simply guarding the chief city of the country, which happens to be within her borders, from the peril and cost of unregulated immigration. And she takes care to make some one else pay all the bills, my friend. The expense of doing all this is chiefly met by a tax on the steamship lines, called "head-money;" a tax of two dollars a head, for all steerage passengers. And beside that she makes the steamship company, at its own expense, carry back to the old country any emigrant who has no money or friends in this. In collecting the head-money tax and in enforcing the restrictions against pauper immigration the State has indirectly the powerful aid of the United States government—a plain recognition of the fact that the whole duty properly belongs to the latter.

The regulation of immigration by states is one of the anomalies of our government. It is a relic of the early conflicts between the powers of state and nation. After the infant Yankee nation had outgrown its first constitution—that absurd, distrustful experiment of setting up a nation and denying it all governmental powers—the matter of imposing and collecting duties on imports of merchandise, etc., which had formed one of the chief bones of contention between states, was taken from state authority entirely, and given in charge of the general government. But at the same time the regulation of the more important *human* importations was left with the states, and to this day the general government assumes no control in the matter of what is strictly an international interest, and concerns the welfare of all the states. Thus it came about that the states in which are immigration ports acquired a large control over the character of the population, and hence over the prosperity of other states. That a business so much international and interstate in character should have been left to local governments is a curious illustration of the lack of foresight on the part of the founders of the constitution, as well as one of many evidences that they were not at heart democratic enough to thoroughly believe in and understand the common people. Had they anticipated that the time would ever come when human cargoes should disembark upon our shores to the number of half a million in a year, of people unused to our institutions and uneducated in self-government, they doubtless would have devised a protective tariff which would have prevented an invasion so threatening, as they might think, to our peace and stability. It is often well that statesmen are not more prescient. Legislating for the future in the light of the present, they would most certainly go wrong, especially in legislating for a country of such rapidly changing conditions as have followed each other here. Those adopted citizens who raise the cry against the Chinese and demand protection against imported labor, may thank their stars that the same spirit did not seize the prophetic minds of the earlier law-makers of the country.

Castle Garden, on the Battery, gives on the loveliest and healthiest park of New York and the noblest harbor in the world. The main structure is old Castle Clinton, a large circular fort built early in the century for the protection of the city. Now it is converted to the uses of peace, to welcome invaders instead of repelling them, but still to protect the city, and the state and the nation. The open central space has been

roofed over and converted into a great rotunda; while the embrasures and casemates designed for great cannon and magazines are used for baggage rooms and various apartments. This is better than hammering swords into plow-shares, this using forts to welcome ploughmen to our broad acres. Wooden excrescences around the wall provide offices, hospitals, insane asylums, labor bureaus, and various other departments. The rotunda and fort walls can accommodate 3,000 immigrants and their baggage—and do you know all that the words, immigrant's baggage, implies?

On this little amphitheater of war is daily held a Congress of All Nations. If you want to see Europe, come to Castle Garden, not go abroad. There is nothing left over there but the houses and the superfluous nobility and wealthy. Men are Europe, and the manhood of Europe is being skimmed off for America's use. A gentleman told me that when he traveled in Circassia he looked in vain through the mass of awe-inspiring female ugliness for the famous types of Circassian beauty. "Where are the beautiful women?" he asked. "In Constantinople, all," was the answer. So, he said, it is with the manliness of Europe—it goes to America. Not the most cultured, intelligent and favored. It would be small merit in them to break away and come to America; that they do not proves that they are too contented, fat and selfish for our use. But a man who, being born and trained to a life of subjection and dependence; rooted to the spot on which generations of his fathers have lived and died; who hardly knows whether his native hills or city streets bound the world or not—when one of these tears up his roots and sets out three thousand miles in search of a chance to breathe and grow, be sure, be very sure there is a spark in him of something that is wanted in this country. There is the germ of an American citizen; the growth of it will appear in a few generations. It is this surviving, vital spark of character that enables this nation to assimilate so much crude human material and convert the so-called "offscourings of Europe" into elements of national prosperity and strength. What could we have done in forty years with seven and a half million foreign aristocrats and capitalists? What would have become of us if they had come to us! A few of them have come lately, and they are already trying to build here a landed aristocracy, and on stolen land at that. Men should be estimated by the abuses and disadvantages they have survived, as well as by what they are. The courage, independence and aspiration that outlive centuries of subjection in sufficient force to carry a man half around the world into *terra incognita* are the elements of empire.

A ship load of six or ten hundred does not make a very big caucis in this rotunda of the world's congress, but it makes the scene picturesque, as to costumes, more so as to goods and chattels—the latter seeming to include women and children. All the family heir-looms, such as pots, pans, feather-beds and nondescript furniture came along. I can believe in all the dozen ship loads of "traps" that "came over in the 'Mayflower,'" since seeing one load of later immigrants debouch. And they come, like a lot of wealthy bankrupts, with all their property on their wives' backs. The loads on these biped beasts of burden make one think of the loads of hay on small donkeys in Spain, or those mountains packed on camels in the East. At the head of the family caravan marches the *pater familias* loaded down with a shot-gun, half a dozen canes, a long-tailed pipe or some queer fiddle-looking instrument. Well, he has never been able to stand upright and hold up his head in the presence of anybody but his wife. A man must rise superior to something. One of these years, mayhap, the order of superiority will be reversed, and some of the daughters of this flock be advocating, or at least thinking, women's rights at Chautauqua. Housewives can tell you how soon some of the daughters of these subjugated women learn a goodly degree of independence. I anticipate this result more for the girls than the boys, because when the caravan files before the clerk's

desk for registration these "beasts of burden" are often the only ones, self-possessed enough to give the names, ages and intentions of the family. Often the lord and master has forgotten the names, generally the ages of his children, and not infrequently he has to refer to his chattel for his own name and age. There is a scared look in all eyes. I don't wonder, after such an uprooting and hegira, that they look dazed, and that some go clean daft—as they do.

One naturally looks here for the queer in dress, action or design, and there is plenty to gratify the curiosity. Far across are two men who look like Digger Indians in queer costumes—dirty red, long sacks and short laced leggings. They are squat, swarthy, sluggish, and outwardly uncanny-looking. We go across the wide rotunda and find that each of these unpromising delegates has a Bible, and that one of them is writing the fly-leaf over with much small, neat chirography—a language which no one here can interpret. They are Russian Finns. Despise nothing you see here, my friend. You would look a trifle out of condition, and mayhap your "plug hat" would excite a smile after a steerage journey to Finland. I doubt if, arrived there, you would settle to as intelligent and philosophical an occupation as writing a commentary on the Bible.

Then come a more canny couple—two manny-clad, bright-faced boys, Scotch bairns, as their pretty dialect reveals. One is ten and the other eleven years old; and these bit laddies are making the journey all the way alone from Loch Lomond to Loch Michigan; billed and ticketed to their widower father in Chicago. It is a picnic to them, you can see, yet in their childish faces there is a sedate gravity, such as belongs to the earnest race of the Covenanters. Nearly six hundred children last year came thus alone "over the back of the round sea" to seek parents or friends. There are in the United States Senate, in gubernatorial chairs, at the head of great industries, in leading positions of all kinds, other boys who in other years came thus alone to the land of promise. So we despise not the day of small things at Castle Garden, says our attentive *chaperon*.

The most out-of-place delegate that I saw here was a Bedouin Arab. "What sought he thus afar!" Very tall and slender and sinewy; swarthy skin, black, close-cropped hair, intensely black stubbed beard, behind and amidst which his white teeth, constantly exposed like a bull-dog's, shine like a battery behind a bristling *chevaux de frise*. His head is raised, his nostrils dilated, his black, piercing eyes look far away over the unseen crowds; he moves restlessly with a swift, cat-like tread and an undulatory motion of his long, lithe body, like that of a tiger. He seems a veritable wild beast at bay, and I watch from a respectful distance to see him pounce down on some unsuspecting emigrant. Yet might not this animal some day turn up an alderman in a "growing city," having first studied law? 'Twere not to consider too curiously to consider so; no, faith, not a jot. I admit it were some time a paradox, but now our time gives it proof.

Plenty of romances and not a few tragedies are enacted or consummated here. If the re-unions that take place in this old fort consecrate it to humanity, and make it a temple of affection, its disappointments make it a theater for melodramas and tragedies in reality. Last year one hundred and fifty-three emigrants were sent to the insane asylum on Ward's Island, East River, a large proportion of whom were young people, and a majority women. They come over to find their mates, and either do not meet them, or worse, find they have lost them indeed. Thence they become aliens to the whole universe and find their only home in the Fantastic Realm. Melancholia is the prevalent form of aberration. The shock of transplanting and the excitement of new scenes upon simple and undeveloped natures are also a pregnant cause of mental overthrow. A little negro boot black, contemplating the insane asylum, said to me reflectively, "I think anybody is

foolish to go crazy." As three-fourths of the crazy ones here are unmarried, it might seem foolish to expose themselves when so simple a remedy is so available as marriage is here.

For Castle Garden is a famous place for weddings. Romances begun in the old country or on shipboard, and eke runaway matches to this distant Greta Green find fusion here. Plenty of girls also come to America to unanticipated homes. A curious feature of the supply agency of the bureau is its match-making offices. The commissioners are applied to by men in this country for wives—perhaps on the principle that if a man marries he will be compelled to support a German or Irish girl anyway, so he might as well marry one and have done with trouble on that score. Sometimes, also, a man sends by mail his request, as who should say, "Please forward to my address in good order, upon approval, one (1) wife, per express." The original of the following letter was shown me at the superintendent's office:

"FORT CŒUR D'ALENE, IDAHO TERRITORY.

"DEAR SIR:—Having noticed in the columns of some New York papers that some young men have procured good wives at the Castle Garden, and as I presume that the demand is not equal to the supply, I am desirous of having a good, honest woman for a wife and would make an offer of a comfortable home to a deserving woman. Of course the lady must be consulted about taking her chances in coming out this far, but I am making this offer in good faith and would like an answer as soon as your convenience will permit. My reasons for sending so far are—I am keeping a hotel, stables and ranch on one of the few routes to the newly discovered Cœur d'Alene gold fields, am doing a fair business, am a young bachelor not yet thirty-two, and can't find a girl of any use to me inside of three hundred miles. So I thought I, being a New Yorker myself, would send and have you try and procure me a

life-partner. Hoping this may meet with kind favor I am, yours, etc.,
"M. E. L."

There is never any difficulty in making up these improvised matches, but the wooers, like young Lochinvar, have to come out from the West and make their own selections. So far as reported, these matches result happily, which goes to show that connubial felicity does not always follow the law of natural selection. Perhaps the matches that are made in Castle Garden are different from those reputed to have been made in heaven.

Somewhat too much of incident.

Is there in all history a human migratory movement like this? Men have always been, like poor Joe, moving on, but generally for conquest or subjugation of other races. No such fusion of bloods has ever before taken place—the nearest approach to it being the amalgamation of races through which the modern Englishman came. But that commingling was always the result of conquest and subjugation, and the antagonistic nature of the union delayed the peaceful fusion and left its impress of belligerency on the resultant race characteristic. In this last Anabasis of Liberty, however, everybody is welcome, all elements are assimilated, everything converted to the uses of empire and the work of peopling a continent with an entirely new race of men—new in blood, thought and aim. Whether as a result of the varied forces of heredity or the unprecedented influences of environment, it is evident that here a new people is being created for a new purpose. The future Greene who shall essay the writing of "The Making of America," will find in the mutual reaction of race characteristics on each other, in the influence of material surroundings and in the stimulus of free institutions, the profound study of the origin and evolution of the American citizen.

ALONE WITH MY CONSCIENCE.

[The following poem was read by Dr. Vincent on the morning of August 25, 1884, at the closing exercises of the Chautauqua Assembly. This poem Dr. Vincent has read at the close of several Assemblies, and always with marked effect.]

I sat alone with my conscience,
In a place where time had ceased,
And we talked of my former living
In the land where the years increased;

And felt I should have to answer
The question it put to me,
And to face the answer and question,
Throughout an eternity.

The ghost of forgotten actions
Came floating before my sight,
And things that I thought were dead things
Were alive with a terrible might;

And the vision of all my past life
Was an awful thing to face,
Alone with my conscience sitting
In that solemnly silent place.

And I thought of a far-away warning
Of a sorrow that was to be mine,
In a land that there was the future,
But now is the present time;

And I thought of my former thinking,
Of the judgment day to be;
But sitting alone with my conscience
Seemed judgment enough for me.

And I know of the future judgment,
How dreadful soe'er it may be,
That to sit alone with my conscience
Will be judgment enough for me.

And I wondered if there was a future
To this land, beyond the grave;
But no one gave me an answer,
And no one came to save.

Then I felt that the future was present,
And the present would never go by,
For it was the thought of my past life
Grown into eternity.

Then I woke from my timely dreaming
And the vision passed away.

And I pray that I may not forget it
In this land before the grave;
That I may not cry in the future,
And no one come to save.

And so I have learned a lesson
Which I ought to have known before,
And which, though I learned it dreaming,
I hope to forget no more.

So I sit alone with my conscience,
In the place where the years increase,
And I try to remember the future
In the land where time will cease.

GOVERNMENT EMPLOYMENT FOR WOMEN.

BY MRS. PATTIE L. COLLINS.

No other issue of the day has absorbed me like the ever vexed problem of woman's work. I have read at various times many learned dissertations upon women's duties, women's spheres and women's capabilities; her few successes and countless failures; most of them from the pens of men, and a few from her own sex, but the first have, as a class, been almost purely theoretical, and the second incomplete, one sided and argumentative rather than instructive. A certain popular author wisely observes that "Everything depends upon the point of view." It is scarcely possible for a man from his standpoint to take in the difficulties and intricacies that lie all along the path of the gentle sex in the pursuit of work, and after having obtained it, its successful accomplishment at a salary not at all commensurate with its value. And the task is equally difficult for a woman, since misfortune begets the most disagreeable and unreasonable form of egotism, and the burden of her grievance demoralizes her logic and vitiates the force of her statements. I am distinctly conscious of all this as I approach the subject, and only a long and crucial experience has given me the courage of opinions. One fact seems to be lost sight of in the ceaseless clamor concerning "women's rights," viz.: that most of them have more "rights" than they enjoy, and conspicuous among them, the privilege of earning their own living. The avenues of remunerative employment are only too few, and each is filled to repletion with a hungry multitude. There are those, the achievements of whose genius have lifted them beyond all praise or blame and given them a rich and well merited reward, but it is not to these exceptional cases that the ordinary laws of the great struggling masses can apply. The world has known but one Mrs. Browning, one George Eliot, one Patti, one Nilsson, but the example of these daughters of the sky soaring and basking in the sunlight has only served to accentuate the gloom and toil of the dwellers in the valleys below. Spirits such as these must ever remain apart from the constant, harassing struggle of average women, and this is the class for which I write.

I have often thought that it was the shadow of the curse of slavery still resting upon our land that prevents, even in the wide and generous light of the present day, a proper recognition of the true majesty of labor. Unfortunately, the term is still regarded as synonymous with servitude, not precisely degraded servitude, but certainly something so near akin to it that it could never be confused with badges of the Legion of Honor!

Sewing, for a woman, means starvation, or slow death by torture; factories and shops tell their own pitiful stories; the paths of music, art, literature, and the drama, are strewn with dismal failures; and when I come to teaching, that worst abused vocation of all, language fails me. In Boston, I have heard it said that a faithful teacher can support the burden of existence only about seven years. I can well believe it; but on the other hand, to one such worker there are ten thousand drones. The first impulse of every gentlewoman, thrown upon her own resources, seems to be to teach; as to what or how, she is nebulous, delightfully vague, the only point settled being the choice of occupation. Governesses are engaged, to whom the entire charge of children is given, who receive the treatment and wages of servants. In our public schools the felicitous standard of excellence is a high percentage in examination, while the far more important considerations of adaptability, patience

and self-control are disregarded. The evil effects of such a system are visited upon defenseless children. Women, as a rule, regard their work, whatever it may be, as only a temporary makeshift; the hope of something better lures them like the *ignis fatuus*; the dim and uncertain prospect of a distant future imparts a half-hearted exertion to the present, and this fact touches the key-note of a large proportion of their failures. If all of them could be brought to a thorough realization that we are a surplus quantity, an unwelcome factor, yet one that can not be eliminated, the answer to these problems which confront us might still be hidden, but we should at least stand upon the threshold. On the other hand, I have known women of singleness of purpose, of unalterable resolution, and the courage of heroes arrayed in the ranks of the bread-winners. True, they belonged to a hopeless minority, but this only served to render their virtues the more conspicuous. Long observation and thorough investigation have led me to the conclusion that the government departments at Washington afford the best field for female labor now open to the sex. Best, because the hours are not unreasonable, and the compensation fair; best, because there are no three months' vacations to be tided over without pay, and also, on account of the certainty of retention unless just cause can be shown for removal. It has been now nearly a quarter of a century since it was decided that women were eligible to these positions, being, I believe, during the late war that the first appointments were made. Small experimental beginnings have crystallized into wonderful results. Hundreds of women through the liberality and enlightenment of our government are enabled to maintain themselves and those dependent on them in comfort and respectability, and each of them holds her office by the same tenure that their superiors hold theirs, so that she is equally independent and fearless, owing her allegiance not to them, but to the government which claims absolute fidelity over a solemn oath. Our public service has been much and justly criticised; it is still very far from invulnerable, but within the last two years it has made more than creditable progress in the right direction. That there have been, at various times, ignorant, careless and corrupt abuses of the appointing power can not be denied. For many years the sole power behind the throne was political influence, and thousands of appointments of both men and women have doubtless been made without reference either to the educational qualifications or moral character of the appointee. Sometimes it was a case that appealed only to the sympathies, as a needy widow, or a wounded soldier; or sometimes the unscrupulous tool of a more unscrupulous politician; not unfrequently a poor relation—all of these were made pensioners upon the treasury of the nation. Liberal pay for conscientious, intelligent labor scarcely constituted one plank in the departmental platform, but a pernicious sentiment looking toward a minimum of work and a maximum of pay exerted a wide influence. In view of the heterogeneous clerical assortment this is scarcely a matter of surprise. There are comparatively few natures so strong that they unflinchingly continue to do right simply because it is right. Even so recently as five years ago, no clerk, not even the most capable and faithful, could possess the assurance for a single day that his or her dismissal might not be demanded to make a vacancy for some one commanding stronger political influence. Inevitably, this knowledge had an injurious effect. Another circumstance: the

salaries being similarly apportioned, it often chanced that a clerk doing five times the amount of work, and of infinitely better quality than his neighbor, received the same pay; and in the course of events a promotion would come to the idle and inefficient employe, while the competent and industrious one toiled on at the old salary.

The Treasury, the Interior, the Bureau of Printing and Engraving, the Postoffice Department, the Pension Office, and the Government Printing Office, all employ a large proportion of female clerks. The average rate of compensation is \$900 per annum. For some years it was much lower, but the end came, and the reward, as it usually does to those who patiently labor and patiently wait. It has proven another verification of the old adage "A work well begun is half done." The progress has been very slow, but all prejudice is obstinate and difficult to remove; every reform fights for its foothold inch by inch; the gates of light ever unclosed reluctantly. The legislative halls of the nation have not been wanting in men who have vehemently maintained that no government clerkship should be filled by a woman. Not on account of mental, moral or physical lack, but because these places were their legitimate spoils, which they prostituted their high offices to unworthily bestow. And on the other side, there have been great and generous spirits that have emphatically declared that *all* of these offices should be given to females, unless, indeed, the charge of bureaus requiring an unusual degree of executive ability. Many women are skillful accountants, neat and rapid copyists, and accomplished linguists, and these are what government work demands. Their accuracy and rapidity in counting money is marvelous. Beyond and far above their intellectual or mechanical capabilities, I should mention honesty. The peculations and defalcations of male employes have been legion, but no woman has ever been known to betray her official trust. A former Secretary has affirmed that in his opinion this unflinching honesty was attributable to cowardice; that they were not too good to steal, only that they were afraid! Well, let the honorable gentleman have his way. No matter how low the motive, the fact remains, and the result is favorable to the national exchequer. Even with the odium of this ungenerous construction, they will probably continue to enjoy a pardonable pride in this bit of departmental record.

The creation of a Civil Service Commission has drawn a broad line of demarcation between the abuses of the past and the reforms of the future. It would be difficult to over-estimate the good already accomplished. In the first place, it has destroyed the incentive for removal, since the vacancy can no longer be filled save by the wholly disinterested and impartial Commission. Secondly, an employe may now indulge a reasonable expectation, if his services warrant it, of advancement from grade to grade as opportunities occur; in any event he will no longer be subjected to the mortification of seeing a wholly unworthy person passed directly over his head to a position to which he was entitled by every law of right and justice. But one of the very best features of this Commission is, the outer wall, the bulwark itself that they have reared, *i. e.*, the examination. It is thorough and comprehensive, and need not be tampered with, or even approached, by the illiterate, since only ignominious failure could result. There is no escape from the ordeal. It is the one narrow path that leads to the inner courts, and there is no avoiding nor evading its labyrinths. It is by no means uncommon to hear complaints and repinings over their hard lot and small salary, from clerks of both sexes, who receive a far greater amount for their services than they could possibly obtain elsewhere. To use the mildest language, it comes with a very bad grace from women who could not earn twenty-five cents per day scrubbing door steps, and men whose highest occupation outside would probably be driving a dray. This class is now effectually shut out. Henceforth none but the intelligent laborer need apply. I do not mean to say that liberal culture, or even a very superior order of education is

necessary for the performance of ordinary clerical work—it is not—but a decent, rudimentary knowledge is indispensable, and this the government has a right to demand. Even this, unfortunately, is but one of the requirements that go toward making up a desirable clerk. The more highly educated are often inefficient, while those of moderate attainments attain an enviable standard of excellence. Acute perception and rapid and accurate performance, an ability to use instantaneously whatever knowledge possessed, a ready and retentive memory, conscientious and never flagging industry—these make up the model clerk. I bear willing and glad testimony that there are many such; those who have an honest pride in their work, who do it well, because it would be impossible for them to do anything carelessly, who do not look forward to "pay-day" for their reward, but find it every day and every hour in the consciousness of duty done. I once heard a chief say to one of his subordinates: "Whenever I give you anything to do I am satisfied that it will be right. I no longer have any sense of responsibility in regard to it. I am *sure* of you." This seemed to me a compliment of the best order, for, alas! the number is very small of whom we can be perfectly "sure." Emerson says of the working classes that "finishers" such as these are very rare, but that the world is blessed in having even a few.

To those whose desires or ambitions lead toward this branch of national service, I would say, the channel for all information is the Commission, with its headquarters at Washington. Neither the member of Congress from your own district, nor even your powerful Senator can now pronounce an "open sesame." Nor can a political force from California make an appointment from Maryland and accredit the appointee to his own State, while Florida grapples with the rights of Oregon, and Maine and Texas are inextricably mixed. Such measures as these have been of frequent occurrence, but the despoilers are now themselves despoiled. Each state has always been nominally entitled to its quota, but practically the law was of no avail. Henceforth a just distribution of favors will be demanded. The English Civil Service, which is the perpetual boast of our cousins across the water, even so late as the time of Trollope's experiences, was in a deplorable condition; the evils of ours are not of such ancient and stubborn growth, and the remedies lie near at hand. We have taken no half way measures; the treatment is heroic, and the cure is to come from the ground up. We may in time arrive at the ideal arrangement of retiring and pensioning these public servants as France does her postal employes, but this will probably be much later on, since our Republic is not modeled after Plato's!

This article is designed specially for women. I have wished to give my fellow laborers not familiar with this particular vineyard some general ideas in regard to these positions, how they are obtained, what qualifications are necessary, and lastly the salaries. As I said before, the average salary for women is \$900 per annum, but there are many who receive \$1,000 and \$1,200, while a more limited number are paid \$1,400 and \$1,600. Leave of absence for thirty days during the year is granted, with pay. Absence, other than this, must be without pay, unless on account of sickness. Of course the departments are closed on legal holidays. The hours are from nine until four, with thirty minutes intermission at noon for luncheon. The offices are well heated, well ventilated, and furnished with the best desks, chairs, stationery, pens and ink; every appliance and convenience that could be desired is liberally supplied. Certainly the last vice of which Uncle Sam could be accused is niggardliness. Payment of salaries takes place on the 15th and 30th of each month. Many employes draw their salaries only on the 30th, but all who wish can do so at both the dates mentioned. One strong argument against the employment of women has been that they lose much more time than men from sickness. This is lamentably true; whether it comes from an abnormal state of existence, the

forcing of weak hands to strong work, and the necessary out-door exposure to heat and cold, rain and snow, I can not say; it may be that the answer is found in the sad and homely saying that "A woman's work is never done." Too many, alas! turn from their desks only to a change of labor at home; to bake and brew, to patch and darn, to nurse the sick, to answer and instruct eager, tireless, little questioners; to be, in a word, father, mother and servant, to an entire household. I can not apply this palliation without a great deal of discrimination. I will generously say that it perhaps covers the cause of one half of the absenteeism attributed to sickness. That there are many conscienceless ones who take advantage of every pretext to remain away from their duties and make false representations in regard to their absence can not be doubted; and naturally

in making up the general percentage the innocent suffer for the guilty, but as this injustice has prevailed throughout human affairs from the beginning of time, it will probably continue. On the other side, I will say that in the important bureau with whose workings I am most familiar, I believe the most careful and painstaking work is done by the female clerks, and the compensation to male clerks is correspondingly much greater. The doctrine of "Equal work, equal pay," is not yet enforced, but the chances are better and the prospects brighter in this direction than in any other. In conclusion, let me add, that I have made this impartial exposition of a dry subject in behalf of such of my readers as stand face to face with that dragon of the century—the unending struggle for food and raiment.

GEOGRAPHY OF THE HEAVENS.

BY CHANCELLOR M. B. GOFF,
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THE SUN,

While affording such accurate methods of determining time, does not directly furnish that by which we are accustomed to be guided, so that astronomers are wont to speak of *solar time*, as *mean solar time*, and *apparent solar time*, the former being that kept by our clocks and the latter that from which the former is estimated. If the earth moved around the sun at an unvarying rate, then each time the sun threw the shadow of a vertical rod directly north (in the northern hemisphere) would indicate noon at the point where the rod was located; and the interval between two such successive shadows would be exactly one day, and we could divide the time into twenty-four equal spaces and call each space one hour. Now, this is what we imagine the earth to do; or rather, for the sake of convenience, and because the results are the same in either case, we conceive the sun to move around the earth, and make a *mean* or *mock sun*, move around the earth in a day of twenty-four hours of equal unvarying length, and call this a *mean solar day*. But the *true* or *apparent solar day* is considerably different from this, being sometimes less and sometimes more than twenty-four hours in length, the *true sun* reaching the meridian as much as $16\frac{1}{4}$ minutes before or after the *mean sun*, both reaching it together only four times each year, viz.: On April 1, June 15, September 1, and December 24. Of course it would be impossible to construct a time-piece that would keep pace with the *true sun*. Indeed, it is difficult enough to construct one that will keep with the mean sun. But all difficulty is obviated by making clocks whose *rate of error* can be determined. This rate being known it is easy to estimate the correction, and thus obtain exact time. For example, suppose a clock to *gain* 0.24 of a second per day, then in two days it will gain two times 0.24 of a second, and in three days three times 0.24 of a second, etc. These amounts subtracted from the noon-time of the clock would give the correct noon. For any other hour, a part of the 0.24 depending on the number of hours after noon must be subtracted. If the clock *loses*, then in a similar manner the proportioned loss must be added. In actual practice, we may say that even the best chronometers do not keep exact time; and every one has to be "corrected" in the manner indicated.

To obtain mean time from apparent time we apply to apparent time a correction called the equation of time. Thus, at noon, on October 1st, in Washington, the equation of time is *minus* 10 minutes 34.58s., which means that if from 12 hours we subtract 10m. 34.58s. we shall have 11h. 49m. 25.42s., the mean time of apparent noon, or noon as indicated by the north shadow of the vertical rod. Or, if at 10m. 34.58s. after

the sun crosses the meridian we set our watch at 12 o'clock, we shall have exact mean time. On the 31st of October the real sun will be 16m. 17.56s. ahead of the mean sun, while on the 31st of December it will be 3m. 38.11s. behind the mean; that is, will reach the meridian at 12h. 3m. 38.11s. p. m. mean time.

Beside the ordinary clocks, the chronometers used by navigators keep mean solar time, and family almanacs usually in some form give the "equation of time" under the headings, "clock slow" or "fast," or "sun south." Astronomers use also another kind of time called "sidereal," of which we may have something to say in the future.

On the 1st, 16th and 31st of this month the sun rises at 5:57, 6:13 and 6:30 a. m., and sets on the same days at 5:42, 5:18 and 4:58 p. m. respectively, showing a decrease of one hour and seventeen minutes in thirty days, or at an average rate of 2m. 34s. per day. On the 18th and 19th the sun will be eclipsed, entering the moon's shadow at 10:20 p. m. on the 18th in longitude $132^{\circ} 0.6'$ east, and in latitude $63^{\circ} 30.5'$ north; and leaving it at 2:15 a. m. on the 19th in longitude $134^{\circ} 22.7'$ west, and in latitude $33^{\circ} 25'$ north. Greatest eclipse occurs at 12:18 a. m. on the 19th. Magnitude, 0.638. As the entire eclipse is during our night, it will of course be invisible to us, but can be seen by the inhabitants of the northeastern part of Asia and the northwestern portion of North America.

THE MOON

Will be eclipsed on the 4th, beginning at 3:07 p. m. and ending at 6:41 p. m., Washington mean time. The beginning of totality will be at 4:07 p. m., and the ending at 5:40 p. m.; the middle at 4:53 p. m. Magnitude, 1.533. As the moon in this section does not rise till about 5:20, only the latter half of the eclipse will be visible. On the 16th, the moon rises at 3:45 a. m.; on the 1st, sets at 2:21 a. m., and on the 31st at 3:11 a. m. On the 4th, at 4:52 p. m., full; on the 11th, at 9:21 a. m., enters upon its last quarter; on the 18th, at 7:23 p. m., new moon; and on the 26th, at 11:46 p. m., enters upon its first quarter. Is nearest to the earth on the 7th, at 8:48 a. m., and farthest away on the 23d, at 7:48 a. m.

MERCURY

Presents himself as an object of interest for a few mornings before and after the 5th, the day on which he reaches his greatest western elongation, $17^{\circ} 58'$ from the sun; and as he rises nearly an hour and a half earlier than the latter body, may with a little care be clearly distinguished. His times of rising are as follows: On the 1st at 4:33; 16th, at 5:12; and 31st, at 6:22 a. m. His motion is direct and amounts to $43^{\circ} 46'$. As he moves away from the sun, after 6:00 a. m. on the 3d, his

diameter diminishes from 7.4'' to 4.6''. On the 17th, at 7:58 p. m., he is 2° 1' north of the moon.

VENUS

Remains a morning star during this month, shining, toward its close, with somewhat decreased brilliancy. Her motion is altogether eastwardly, and amounts to 33° 12' 46'', diameter changing from 21.6'' on the 1st to 17.6'' on the 31st. On the 1st, she will rise at 2:13; on the 16th, at 2:35; and on the 31st, at 3:01 a. m. On the morning of the 7th the trio, Jupiter, Venus and *Alpha Leonis* (Regulus) will give an exhibition worth much more than all the trouble it costs to obtain the view. Jupiter rises first at 2:30; a few minutes later, and to the south, Venus appears, and almost at the same time a little northward, Regulus: the three presenting a combination rarely witnessed. On the 6th, at 11:00 a. m., Venus will be 1° 15'' south of Jupiter; on the 7th, at 7:00 p. m., 55' south of Regulus; and on the 15th, at 2:48 a. m., 3° 35' north of the moon.

MARS,

Though accounted an evening star, will be above the horizon in the day time most of the month, on the 1st rising at 8:55 a. m. and setting at 7:01 p. m.; on the 16th, rising at 8:50 a. m. and setting at 6:32 p. m.; and on the 31st, rising at 8:46 a. m., and setting at 6:08 p. m. Its declination on the 31st is 21° 34' south. Motion for month direct and amounting to 22° 28'. Diameter decreases from 4.6'' to 4.4''. On the 21st, at 6:15 a. m., 4° 10' south of the moon.

JUPITER

(Together with Venus) makes this month's mornings brilliant.

Rising on the 1st at 2:26, on the 16th at 1:44, and on the 31st at 12:57 a. m.; and his diameter increasing from 31'' to 32.2'', makes each stay appear longer and each return brighter. His motion is direct and equals 4° 56' 51''. On the 6th, at 11:00 a. m. he is 1° 15' north of Venus; and on the 14th, at 11:57 a. m., 4° 42' north of the moon.

SATURN

Rises on the 1st at 9:29 p. m., and sets on the 2nd at 12:09 p. m.; rises on the 16th at 8:29 p. m., and sets on the 17th at 11:09 a. m.; rises on the 31st at 7:29 p. m., and sets at 10:02 a. m. on November 1st. His motion, 42' 26'', is retrograde. Diameter increases from 17.8'' to 18.8''. On the 5th, at 8:00 a. m. is stationary; and on the 9th, at 3:50 p. m., 3° 30' north of the moon.

URANUS

Will be morning star throughout the month, moving eastwardly 1° 40' 45''; diameter increasing about one-tenth of a second. On the 8th, at 3:00 a. m. will be 1° 10' south of Mercury; on the 16th, at 7:19 p. m., 2° 5' north of the moon. Its times of rising are as follows: On the 1st, 5:13 a. m.; on the 16th, 4:19 a. m.; on the 31st, 3:24 a. m.

NEPTUNE'S

Motion for the month is 44° 22'' retrograde; diameter, 2.6''. On the 7th, at 11:44 a. m., he is 1° 33' north of the moon. His night ascension on the 31st is 3h. 21m. 23.5s., and declination 16° 36' north, about 1h. 8m. west of *Aldebaran* in the constellation *Taurus*. He rises on the 1st, at 7:38; on the 16th, at 6:39, and on the 31st, at 5:39 p. m.

THE MERCIFUL INSTITUTIONS OF PENNSYLVANIA.

BY PROF. CHAS. J. LITTLE, PH. D.,
State Librarian of Pennsylvania.

The State of Pennsylvania makes generous provision for her poor—or, since one half of the inmates of her alms-houses are foreign born, it will be better to say, for the poor within her borders. In the twenty counties of the state in which there are no alms-houses, and where the poor are cared for under the township system, there are expended perhaps \$300,000 annually. How the poor are cared for under this wretched system, it were perhaps better not to inquire too curiously. In the remaining counties of the state there are sixty-one alms-houses, the total cost of maintaining which amounted in the year 1883 to \$1,296,945. In addition to this sum, these same counties spend a quarter of a million of dollars in what is called "out-door relief." Much of this latter expenditure is, judging from the report of the Commissioners of Public Charities, sheer waste.

These sixty-one alms-houses of the state shelter 8,630 inmates, of whom 2,328 are women, and 1,024 are children. In the year 1883, 1,739 inmates of the alms-houses were reported insane. By act of the last legislature children over two years of age are excluded from the county alms-houses, and insane persons are ordered to be removed to the state hospitals. Unfortunately, the legislature neglected to appropriate the money necessary to carrying out this reform, and as a consequence, there has been serious trouble, and probably not a little suffering throughout the state. It would not do to speak of all these sixty-one alms-houses as merciful institutions. Some of them are branded by the Commissioners of Public Charities as abodes of cruelty; others, as breeding places of vice and immorality; others still as utterly inadequate, both in building and management, to the purposes of their existence. Among those thus branded are the alms-houses of two of the richest counties of the state—Chester and Cumberland. On the other hand, many of these institutions are worthy of all praise, the taxpayers having spared no expense in the erection and equip-

ment of the buildings, and the management being intrusted to conscientious men and women.

In addition to this provision which the state has made for the poor within its limits, there are numerous private institutions for the care and comfort of the adult poor. There is, for instance, in Reading, a "Home for Aged Widows and Single Women," which, at present, contains eleven inmates, its full capacity. Many more seek the benefits of this institution than can be accommodated in the two story brick dwelling which has been built expressly for its purposes. In Philadelphia there is a "Home for Aged Couples," containing twelve inmates; an "Old Man's Home" in West Philadelphia, containing 65 inmates; the "Penn Asylum for Indigent Widows and Single Women;" the "Maypothor Home for Women;" a "Home for Infirm Colored Men and Women;" and the "Edwin Forrest Home for Aged and Infirm Actors." These are undenominational. They are supported, partly by admission fees, which are required of those receiving the benefits of the various homes; partly by the property conveyed to the homes by the inmates, but chiefly by contributions and bequests of benevolent individuals.

The Roman Catholic Church supports, through the Sisters of the Good Shepherd, "Saint Ann's Widow's Asylum," to which widows over fifty years of age are admitted; they also have a "Home for the Aged Poor," under the care of the Little Sisters of the Poor, which has at present some three hundred inmates. Christ Church, Philadelphia, has a "Home for Aged Women," as have also Saint Luke's Church, in Philadelphia, and Saint Luke's Church, Germantown. There is also in Philadelphia, a "Home for Aged and Infirm Methodists," with accommodations for one hundred men and women.

Under the Constitution of 1873, the legislature is forbidden to appropriate any monies to denominational or sectarian insti-

tutions, no matter how large their scope, or how unsectarian may be their benevolence. But there is nothing to forbid generous appropriations to such homes for the aged and infirm as are not under denominational control; yet the managers of such institutions should bear in mind that in order to secure any help from the state, they should make report of their workings to the State Board of Public Charities. Next to the institutions for the adult poor, it will be best to consider the large provision which has been made both by the state and by private individuals for the care of children; especially for the care of orphans. First of all stands that magnificent network of charities which covers the entire state—

THE SOLDIERS' ORPHANS' SCHOOLS.

For these the total appropriations have been, in round numbers, eight millions of dollars. They were begun in 1865, and have therefore been in operation nearly twenty years. These homes may be divided into two classes: first, the Soldiers' Orphans' Schools and homes, of which there are twelve—three in Philadelphia, and the remainder in other parts of the state; and secondly, homes which have undertaken the education of soldiers' orphans, but which are not exclusively devoted to that work. There have been admitted to these schools since the establishment of the system, 13,011 children; and there were in school on the 31st of May, 1883, 4,630 children, of whom 1,931 were girls. In the report of John W. Sayers, special inspector and examiner of orphan schools, it is stated that "the schools are fully up to all reasonable expectations; splendid work has been done, and is still being accomplished for the best interests of the scholars." By the Extension Act of 1883, these schools will be continued until June 1st, 1890, at which time Pennsylvania may rest satisfied that she has discharged some of her debt toward her deceased soldiers in no ungenerous fashion. The schools will, by that time, have cost the state nearly ten millions of dollars; a sum which no citizen of the Commonwealth will begrudge to the children of the men whose bones are scattered from Gettysburg to the Gulf of Mexico.

Next in order to the Soldiers' Orphans' Schools is the magnificent charity of Stephen Girard, known throughout Pennsylvania, and throughout America, as "Girard College." This institution, in its buildings, in its general equipment, in its corps of teachers, is one of the most remarkable in the world. The buildings were erected at an expense of two millions of dollars; subsequent additions have largely increased this original outlay. But the property and funds now in the hands of the Girard Trust amounts to nearly ten millions of dollars, and is administered with great care and intelligence. The gross revenue of the Girard estate in 1883 amounted to \$931,295. By the will of Mr. Girard this college is for the benefit of poor white male orphan children. The first preference being given to orphans born in the city of Philadelphia, the second to those born in other parts of Pennsylvania, the third to those born in the city of New York, and the fourth to those born in the city of New Orleans. No child can be admitted before the age of six, nor after the age of ten. At present the institution contains 1,104 pupils. Under the will of Mr. Girard no attempt can be made to give these boys what is sometimes spoken of as "higher education;" the shrewd old merchant thinking it much wiser that they should be apprenticed to trades than that they should be turned into the world without capital to make a living by their wits.

Mrs. Eliza Burd, of Philadelphia, in the year 1848 founded a home for girls, which was handsomely provided for in her last will and testament. This institution, which is under the care of Saint Stephen's Episcopal Church, of which Mrs. Burd was a member, is situated in West Philadelphia, and is one of the finest charities of the city. The grounds are extensive, the buildings are very fine, and the results thus far achieved have been of a most satisfactory character. In addition to these orphan schools there are in Philadelphia nineteen asy-

lums for orphans and abandoned children. Some of these, like the Northern Home and Southern Home for Friendless Children, are undenominational. Others of them, like the Methodist, Baptist, Lutheran, and Jewish orphanages, are sectarian, and thus excluded from state aid. Perhaps the Roman Catholic Church has more homes of this character in different parts of Pennsylvania, than all other denominations taken together. In Philadelphia alone they have "Saint Joseph's Female Orphan Asylum," in charge of the Sisters of Charity, "Saint John's Orphan Asylum," in charge of the Sisters of Saint Joseph, "St. Vincent's Orphan Asylum," at Tacony, an "Asylum for Italian Orphan Children," "The Catholic Home for Destitute Orphan Girls," "St. Vincent's Home," which cares for children who are under five years of age, and two magnificent orphanages in West Philadelphia. Indeed, it is difficult to know the exact extent of Roman Catholic charities of this kind in our state. Excluded by law, as are all sectarian institutions, from any participation in the public funds, they make no reports to the public authorities, and not accustomed to appealing to the general public for aid, their workings are known only to the members of their own communion. In the city of Pittsburgh the Roman Catholic Church has four Orphan Asylums, the United Presbyterian Church has an Orphan Home, the Episcopal Church has a Home for Orphan Children and Aged Women.

There is also a Protestant Orphan Asylum, and a Colored Orphan Asylum in the same city. There are homes for orphans in Beaver, in Berks, in Huntingdon, in Lancaster, in Perry, in Schuylkill, in Susquehanna, in Luzerne, and in York counties, other than those which are maintained by the Roman Catholics. A third kind of provision for the poor is

THE TEMPORARY HOME.

Some of these are for friendless girls, for the time without occupation and without roof to shelter them; some of them are for those who have strayed from the paths of virtue, and who require the special care of those who have the courage and the Christian faith to deal with this phase of human wretchedness.

Of the first class we may mention: "The Western Temporary Home," which is a shelter for those too weak to go to work, "The Boarding Home for Young Women," and a "Home for the Homeless;" and of the second, "The Howard Institution," under the care of an association of women Friends, for furnishing shelter, food and clothing to poor out-cast women, and "The Midnight Mission," which has for its object the rescue and salvation of fallen women. Here might be included the Inebriate Asylums, such as "The Franklin Reformatory," whose object is the recovery of drunkards to decent society. A peculiar charity of this kind is a "Temporary Home for Children," which is designed to lighten the burden of parents whose circumstances are such as to prevent the proper care of their offspring. The number of children in this home is at present sixty-one; and the institution seems to be accomplishing a good work.

Allegheny City has a "Home for the Friendless," somewhat similar to the one just described. In this home one hundred and twenty-five children are receiving care and support at the present time. It is impossible to do justice to the charities of Pennsylvania, in an article of limited extent; many of them can not be enumerated at all; some of them can only be mentioned; and hence I shall make no attempt to estimate either the cost of these charities or the value of their results. And much, in any event, would of necessity remain untold. No record is possible—at least, no earthly record—of the prayers, the anxieties, the thoughtfulness, the patient persistence of the men, and especially of the women, who sustain these charities with their energies and their love. Whilst others are helplessly bemoaning the evils of large cities, these faithful servants of him who went about doing good are quietly, but efficiently, working to rescue and save a soul from darkness, and a body

from pollution. Every large city has its devouring eddies into which drift hundreds of thoughtless and ignorant creatures every year. Every large city in this state, let us thank God, has also its brave and earnest Christian souls who are ready to run no small risks, and to make no small sacrifices, if, per-adventure, they may save a soul.

PROVISIONS FOR THE INSANE.

There are five Insane Hospitals in the State of Pennsylvania, under the control of the state, located respectively at Harrisburg, Danville, Dixmont, Norristown and Warren. The total expenditures of these five hospitals for 1883 amounted to \$711,666. In addition to these there are "The Pennsylvania Hospital for the Insane," "Philadelphia Hospital for the Insane," "The Friends' Asylum for the Insane," located at Frankford, near Philadelphia, and the "Training School for Feeble Minded Children;" the four latter involving an annual expenditure of nearly \$400,000. The total number of insane confined in these institutions is 5,338, of whom 4,361 are indigent patients supported at the expense of the state. When the act of the legislature, already alluded to, shall have taken full effect, the total number of insane patients in these hospitals will reach at least 7,000. "The Pennsylvania State Lunatic Hospital" at Harrisburg was founded in the year 1848, and since that time the total amount appropriated by the state is \$1,110,929. The district entitled to the benefit of this hospital is composed of sixteen counties, with a population of nearly one million; and the capacity of the hospital is only sufficient for twenty-seven per cent. of the insane persons resident in the district. "The Western Pennsylvania Hospital," at Dixmont, was founded in 1855. The total amount appropriated by the state since that time is \$1,022,128. In addition to what it has received from the state, this hospital owns 373 acres of land, which were paid for entirely by private contributions. The district in which this hospital is located is composed of thirteen counties, with a population of 900,000; and the hospital has accommodations for only twenty-two per cent. of the insane residents within the district. "The State Hospital for the Insane" at Danville was founded in 1868, and has received in appropriations from the state, \$1,408,900. The district in which it is located is composed of twenty-one counties, with a population of 800,000; and the present capacity of the hospital for seven hundred patients, is sufficient for fifty-four per cent. of the insane residents within the district. "The State Hospital for the Insane" at Warren was founded in 1873. The total amount appropriated by the state since that time is \$1,125,000. The district in which it is located is composed of ten counties, with a population of about 400,000 inhabitants. Its present capacity is six hundred, which is eighty-seven per cent. of the insane residents of the district. "The State Hospital for the Insane" at Norristown was founded in 1876. The amount appropriated by the state since that time is \$9,616,846. The district within which it is located is composed of seven counties, with a population of 1,300,000. Its present capacity is eight hundred and four; that is for only thirty-four per cent. of the insane residents of the district. "The Pennsylvania Hospital for the Insane" is located in West Philadelphia, the hospital grounds covering 113 acres, upon which are erected two buildings, one the department for males, and the other the department for females. This is the institution which has become known throughout the country by the name of its long-time chief physician and superintendent—Dr. Thomas S. Kirkbride. Although it has frequently received aid from the state, it is not a state institution. From the opening of this hospital up to 1882, the number of patients admitted was 8,673. Of these, 7,052 were residents of Pennsylvania, the remainder coming from all parts of the United States, Central and South America, and some few from Europe. The total annual expenditures for both departments during 1882 was \$182,000. "The Friends' Asylum," at Frankford, has long

been known in the eastern part of the state as a well conducted and generously managed institution.

It has at present about one hundred patients, all of whom are supported by their friends. "The Philadelphia Hospital" contains 617 patients, of whom 332 are female. Under what is known as "The Hoyt Lunacy Act" of 1883, the supervision of hospitals for the insane, both public and private, will be much stricter than it has ever been heretofore. That act was intended to remedy many of the evils which are constantly occurring in the treatment of these sorely afflicted people. A special committee of the Board of Public Charities is charged with its execution, which committee is composed at present of Philip C. Garrett, Henry M. Hoyt, Thomas G. Morton, E. Coppee Mitchell and W. W. H. Davis, whose names are a guarantee that the insane of Pennsylvania will be treated with scrupulous care, and that no sane man or woman need any longer dread that one form of incarceration which is worse to the healthy minded than either the prison or the grave—incarceration among maniacs. Akin to these institutions for the insane is the Training School for Feeble Minded Children, located at Media. This institution was founded in 1853, and has received from the state since that time the sum of \$723,498. It also receives contributions from neighboring states, in return for which the children of contributing states are admitted to its benefits. The number of pupils now in the school is 428, of which about 200 are from the State of Pennsylvania. The total annual expenditure of this school amounts to \$109,829.

HOSPITALS FOR THE BLIND AND THE DEAF AND DUMB.

The most noted of these is "The Institution for the Instruction of the Blind," located in Philadelphia. The buildings of this institution are valued at \$183,000; its funds and investments at \$266,773. The average number of pupils in the institution for 1883 was 178; and the average number of state-beneficiaries 145, for which the state granted the sum of \$43,500.

There are also located in Philadelphia two working homes for the blind—one for men and one for women—into which are received many of the graduates of the Institution for the Instruction of the Blind. In the home for men there are eighty-five beneficiaries; in the home for women there are forty. The purpose of these institutions is, as far as possible, to offer employment and not alms; to make its inmates independent, so far as their disability shall permit. There is an Institute for the Deaf and Dumb located in Philadelphia, and a Western Pennsylvania Institution for the Deaf and Dumb, located about twelve miles east of Pittsburgh. In the former of these institutions there are about 300 pupils; in the latter about 102. To the former the state appropriates \$78,000 annually. For some reason, unknown to me, the appropriation of \$40,000 asked from the legislature by the latter last session was not granted.

HOSPITALS FOR THE SICK AND THE INJURED.

The one purely state hospital in Pennsylvania is "The Anthracite Hospital," located at Ashland. This is intended for the coal and mining regions, in which injuries are of such frequent occurrence. Unfortunately, this was not opened for the reception of patients until November, 1883; but already upward of forty-one patients have been admitted, and are receiving the benefit of medical care and treatment. Of institutions not under the control of the state, the most famous is probably "The Pennsylvania Hospital," located in Philadelphia. Round this have grown up a number almost as famous—the splendid "University Hospital" in West Philadelphia, "The Orthopedic Hospital" for the treatment of nervous diseases, the Presbyterian and Episcopalian Hospitals, the Jewish Hospital, the new Stewart Hospital, founded by a distinguished Methodist physician of Philadelphia, the Wills Hospital for diseases of the eye, the Howard Hospital for incurables, and the Children's Hospital for the relief of sick and suffering children.

In addition to these are the "Preston Retreat," one of the most

touching charities of Philadelphia, and the "Maternity Hospital," which has been founded to rescue unfortunate women in the terrible extremity into which their sin has driven them. Outside of Philadelphia there is the splendid hospital recently opened at Harrisburg, "The Western Pennsylvania Hospital," "The Mercy Hospital" of Pittsburgh, the Hospital of Wilkes-barre, the Hospital of Scranton, the Reading Hospital, "The St. Joseph's Hospital" of the same city, the "St. Luke's Hospital" of Bethlehem, and the "York Hospital," of York, Pa. The work of these hospitals it would be impossible to describe within the limits of an article like this. The patients within their walls not unfrequently receive, gratuitous, treatment equal to that for which the rich must pay enormous prices.

But it should be mentioned in this connection that in Philadelphia there are two Homes for the Training of Nurses, physicians having long since discovered that their skill and industry is frequently thwarted by the ignorance and incompetence of ordinary nurses. The women who are admitted as pupils to these homes must pledge themselves to the work for which they are prepared. They are taught by lectures, and by actual work in the sick room, how to handle and care for the sick; and when their education is completed their names are placed upon a register, so that those desiring trained nurses may secure them by application to the matrons of these establishments. A more important charity hardly exists within the state.

This article may be fitly closed by reference to those institutions which are founded for the care of children afflicted with that which is worse than disease—with a tendency to crime. Of these there are two now in operation—the House of Refuge in the city of Philadelphia, and the Reform School at Morgantown, Washington county, Pa. The House of Refuge expends annually about \$130,000, and the Reform School about \$190,000. The total number of inmates in the House of Refuge is 671, and of the Morgantown School 339, making an aggregate of 1,010. Perhaps there is no sadder chapter in the report of the Board of Public Charities than that relating to

these schools. The statistics deserve careful study, and show how unwarranted are many of the assertions constantly made about the criminal classes. For instance, nearly one-half of these children are of American parentage, and of the 490 children committed, only 24 could read and write well; whereas only 125 were absolutely illiterate. Two hundred and eighty-five were committed for that which is set down in the statistics as "incurability." It would be curious to know just what this means, and whether, after all, the real fault was not chargeable to the parents rather than to the child. I can conceive of nothing more terrible than that which I fear lurks underneath this item.

There is now being erected at Huntingdon an

INDUSTRIAL REFORMATORY

To which all male criminals between the ages of fifteen and twenty-five, sentenced for the first time, shall be committed. The purpose of this Reformatory is, if possible, to save to society youthful criminals. The jail and the penitentiary only harden the offender, and turn him forth hopeless, helpless, revengeful, and in his own terrible language, "To get even with the society which has punished and destroyed him." Ex-Governor Hoyt, whose large mind and generous heart are only fully known to those who have close personal intercourse with him, was strongly impressed during his administration with the defects of our treatment of the criminal classes. He made himself a thorough master of the literature bearing upon this subject, and became an ardent, even enthusiastic advocate of the reformatory system; and during his administration, and since his administration, has done his utmost, in public and private, to further the completion and the opening of this institution, which, it is hoped, may be ready for occupancy at an early day.

Pennsylvania, which spends such large sums for its poor, which pours out its thousands for its insane, its sick and its afflicted, may well afford to spend even millions for the reformation of its criminals, many of whom are quite as much sinned against as sinning.

THE C. L. S. C. AT THE ASSEMBLIES.

CHAUTAUQUA, NEW YORK.

The summer vacation which the C. L. S. C. allows, is characterized by one particularly strong and profitable feature, a feature peculiar, too, to this organization. It is the system of summer meetings. These meetings are not idling times for holiday excursions, nor are they outings even. They are serious assemblies for serious purposes, and are marked by original and charming methods of work. Though the dozen or more assemblies which have sprung from the Chautauqua Assembly all introduce these C. L. S. C. methods, it is at Chautauqua that we naturally find them in their original form. With the work of one year over and the work of another approaching, it is the plan of the counselors to save rather than kill the time of the interval; to spend it in carefully examining the work done, in comparing plans, listening to and weighing criticisms, in devising new ideas for the future, in short, in taking an inventory of stock now on hand, and in laying in new goods for the coming year. Most successfully was this accomplished at Chautauqua this year during the months of July and August.

The Round-Table was, of course, the gathering through which most was done. Before this season the Round-Tables have been held during the August meetings only, but July found so large a number of the members of the C. L. S. C. at Chautauqua that the five o'clock hour was set aside from the first, and during the entire season at least three afternoons of the week found the "White-Pillared Hall" filled. These assemblies had some peculiarly attractive points, striking even

to the idler, who, strolling by, stopped to look and listen. Perhaps one of the first attractions was the charm which the Hall and Grove never failed to exercise, a charm which always contributed to the success and enjoyment of Round-Tables, Vesper Services and Vigils. The rustling trees, the long rays of golden light, the fair vistas of sky and water and sun-lit foliage which one catches through the frame-work of white pillars produce that strong sympathy, that oneness with the life of nature which elevates the heart, invigorates the mind, and for the time, at least, raises one above mere earth life. Without exception the five o'clock hour was one of rare beauty. Many remarked during the summer: "Is it not strange that we always have a pleasant evening for our C. L. S. C. meetings?" The very weather seemed to breathe a benediction.

The Round-Tables were uniformly characterized by earnestness. The people who met had serious purposes written on their faces, and in all the deliberations it was evident that the best good of the great Circle was at heart. The "best plan" not "my plan" seemed the desire of each. This earnestness was accompanied by the greatest eagerness. A lecturer before the "Teachers' Retreat" remarked: "These C. L. S. C. people completely nonplus me. I never saw folks so eager to learn." It was true; they were eager, anxious, determined to learn. They sought the best and truest methods of work, the strongest thoughts on all subjects, and the newest facts in each branch of knowledge. The Round-Tables brought together the very people at Chautauqua who were most deeply imbued with this energy.

The unity of spirit was remarkably strong. At one of the most impressive meetings of the season this oneness in feeling was thoroughly proven. Some one had suggested in a note to the leader that a plan should be introduced into the C. L. S. C. by which the religious readings of the course might be made denominational; the secular readings being kept alike for all, but several courses of religious readings being prepared so that each reader might use books setting forth the doctrines of his own church. The feeling aroused against this measure was intense. Most emphatically did the members express the opinion that any plan which should divide the readings of the Circle even on one point should be rejected. We have never seen any expression of opinion on the part of the members of the C. L. S. C. which so plainly said: "This is a brotherhood in which we will not be divided by creed, doctrine or difference."

In all the serious work done there was a tender thoughtfulness and care for those who were serving the Circle, which was most touching. It was shown in many ways: in greetings of flowers and kind messages sent to the Superintendent of Instruction, in the willing spirit which every one showed in helping to carry on the work, but never more beautifully than in the testimonial of books sent to Chautauqua's bell-ringer, with the following resolution, adopted at the Round-Table of August 23: "*Resolved*, That the members of the C. L. S. C. here present join in a most heartfelt appreciation of the fidelity of our beloved bell-ringer, Father Skellie, in his labors of love during the years, ringing regularly the Bryant bell on all memorial days in the interest of the C. L. S. C. near and far, and showing a deep and abiding interest by word and deed in all the general well-being of our beloved Chautauqua; and we hereby present to him the accompanying testimonial of our love and esteem."

The vesper services filled the five o'clock hour each Sabbath. They were marked by the same earnestness and brotherly feeling which was so strong in the Round-Tables and hallowed by a deep religious spirit. These meetings were thoroughly spiritual. An influence pervaded them which could not fail to touch an observer. The great interest in the vesper services at Chautauqua this season ought to lead to a wide observance of these services during the year by local circles.

Social life was by no means neglected, but promoted by some charming devices. Among the most enjoyable reunions were the vigils held in the Hall of Philosophy in the weird light of the Athenian watch-fires. The strangeness of the scene gave a peculiar charm to these gatherings. In fact the novelty of all the C. L. S. C. entertainments at Chautauqua gave them a certain *esprit du corps* which was very captivating. Adding to this the strong class feeling which prevailed, and we have the very best elements for enjoyable social affairs. Each class was thoroughly organized, and planned for its members excursions, reunions, banquets, camp-fires and vigils without number. It would be very hard to say which class had the most enjoyable season. It was certain, however, that they all learned to know each other better, and the hours spent in chatting around the camp-fire or in listening to pleasant and witty speeches from their members at the reunions in the Temple, or in steaming around the lovely lake, were among the most profitable as well as enjoyable spent at Chautauqua.

Of course the C. L. S. C. work had its climax in the commencement season, which was opened on Sunday, August 17, by the baccalaureate sermon delivered by Rev. Herrick Johnson, of Chicago. Practical and strong, this sermon was a fitting preparation for the exercises of Tuesday, the 19th of August, the graduating day of the Class of 1884. This event, so full of meaning to the members of the class, had a setting as beautiful as ever blessed the graduation of any one. It was a perfect August day, the air flooded with a wealth of sunshine, but its heat tempered by a delightful breeze. The imposing ceremonies began promptly. Early in the morning the long processions consisting of the Trustees of the Assembly, professors and students from the C. S. L., the classes of the

C. L. S. C., and the friends of the graduates, were formed. While these lines were gathering, the Class of 1884 entered the Gate to St. Paul's Grove, marched under the arches, and was received at the Hall of Philosophy, where the solemn recognition services were performed. There the members of the Class of 1884 who had completed the prescribed course of reading were accepted and approved as graduates of the Chautauqua Literary and Scientific Circle, and were pronounced entitled to membership in the "Society of the Hall in the Grove."

No one who saw this scene can ever forget the solemn ceremonies. When it was over the class marched between the open ranks of the long processions formed to do them honor and filed into the Amphitheater where the graduation services were held. After the opening exercises of song, prayer and readings, Counselor W. C. Wilkinson, D.D., of Tarrytown, N. Y., delivered the following commencement oration:

LITERATURE AS A GOOD OF LIFE.

The Chautauqua Literary and Scientific Circle is founded, at least in part, upon the idea that literature is a true good of life. Is it? That is the question which I raise for discussion to-day.

A strange time of day, I hear some of you exclaim, for that question to be raised. Are we not nearing the end of the nineteenth century of the Christian era? May we not take a few things for settled, and is not the worth of literature one of those few? But there is a French saying that it is the unexpected which happens. So it is the out-of-season that is opportune—sometimes. And this seemingly out-of-season topic, this anachronism, the question of the value of literature, is perhaps exactly the thing that will prove timely to-day.

For, incredible as it should seem, the real value of literature, the validity of the claim of literature to be regarded as a substantial human good, has of late been brought seriously into question. It is the men of science—not all of them, but some of them—that begin to challenge to literature its hitherto conceded title to be considered one of the great interests of mankind. These men say literature has had its day. A long day it has been, too long in fact, but the day is done now and literature must disappear. The future—such is their language—the future belongs to science. Science is the true great good of the human race. Science, they go on to represent, science can do for us what we really need to have done. Literature, on the other hand, can supply no real want of mankind. The great vogue that literature has enjoyed in the past, is due to an illusion—an illusion that with the broadening light of science, a light brightening and broadening every moment, dissolves and vanishes. More and more we are having done with the traditional and conventional. And anything more entirely traditional and conventional than the claim of literature on the attention and reverence of men does not exist. What we really need, and what we are going henceforth to insist on having, is substance, not shadow. Literature is shadow. It affords no satisfaction except to the sentiment. It makes nobody stronger, healthier, richer, more comfortable. It does not help us travel faster or travel more safely. It does not carry messages for us. It does not build our houses, or ventilate them, or warm them. It does not plant, or cultivate, or reap. It does not bind, or thresh, or grind, or cook. It does not invent any of the conveniences of life. We do not owe the sewing machine to literature, or the telegraph, or the telephone, or even the printing press itself, which so serves literature. Literature is a drone and an idler. Science works and produces. Science has done for us all the things enumerated, with many things beside, too many for enumeration, in which literature has had no useful part at all. Literature is a fine gentleman, a fine lady, sitting by with folded hands, hands folded and too delicate, far too delicate, for any productive employment. We can get along without this ornament to our civilization—the delight, the luxury of a few, a burden which the many must drudge to support. Science, on the con-

trary, is the servant equally of all. Her hands are not afraid of soil and toil. She loves to work. Give her henceforward the chance that literature had, abundantly had, and neglected. Endow schools for science, encourage her, cheer her; in short, let science have the place that literature has enjoyed too long.

Such, I say, is the bold language in disparagement of literature, and in comparative exaltation of science, that we find some scientists, or perhaps I ought to say some literary men, self-constituted spokesmen for scientists, holding in these days concerning the just claim of literature to be regarded as one of the true goods of human life.

Now I propose that we entertain candidly the question thus raised. Let us not treat it as a question to which the answer is foregone. Let us put aside prepossession, and ask ourselves freshly and freely and frankly, quite as if our conclusion were doubtful, what are the rational grounds on which we may rest the title of literature to share with science, at least equally, the attention and the cultivation of mankind.

Share with science, I say, and at least equally share. More than this I do not claim. Certainly I should not claim more than this in presence of the C. L. S. C. You are a circle or society of literature indeed. But no less you are a society of science. You embrace both ideas, both interests, with impartial regard. You would not listen favorably to me were I to decry science. But I have no such disposition. I love science, honor her, applaud her, bid her God-speed. I wish I knew more of what science could teach me. I wish I could do more to help science on. But at least, with all good heart, I say, God make her prosper! And this breadth of sympathy, in my mind and my heart, I owe largely to literature. Literature, as I understand her spirit, is catholic and generous. If I have myself any capacity of liberal love for human progress in whatever sphere, I have derived that capacity in no small degree from the inspiration of literature. I should wrong my own client, I should grieve her, I should earn rejection at her hands, if I stood here, or elsewhere, in the name of literature, to say aught, as if on her behalf, against a sister that she loves. For literature loves science, and will contentedly hear nothing to her harm.

What, then, I ask, are the sound and substantial reasons, the reasons valid in the court of common sense, why we should stand by literature as one of our great goods of life?

The reasons that I find are of two sorts: First, those that respect the number of the persons benefited; and, second, those that respect the degree to which these are benefited—in other words, first those that respect the quantity, and second those that respect the quality of the benefit bestowed.

First, then, as regards the breadth, the diffusiveness, of the blessing that literature ministers to mankind.

But since the present comparison is naturally between literature and science, it may be well, at this point, that we pause to take our bearings. What is literature? And what is science? Let us clearly understand the terms and ideas with which we deal. Literature then may be defined as the record of what men have thought, felt, fancied, done, in the world. Science is reasoned and classified knowledge respecting the facts and laws of nature or the physical universe. Our question is not, Which is the greater good, literature or science? Our question is, Is not literature, as compared with science, at least an equal good?

Now we, that is, men and women in general, who ask this question, may have either one or the other of two quite different relations to literature or to science. These two different relations we may name and distinguish. In the first place, you—any man or any woman, I mean—may be either, on the one hand a producer of literature, or a promoter of science; or, on the other hand, you may be simply one to enjoy literature or to reap the fruits of science. Since, however, those who make literature also enjoy literature, and those who advance science also reap the fruits of science, we may as well

disregard entirely the productive relation which belongs in either case to the few, and consider only the fruitional relation, which belongs in both cases to the many—in fact, to all.

Just here, however, I am met with a warning. I am bidden take heed. I am told that exactly because literature is not to all a good, but a good only to the select and favored few, because literature is aristocratic, not democratic; because it is a luxury, not a necessity; because it concerns not the average man, but the picked man, one in a thousand, not the thousand—exactly because of this, I am told, it is that literature has got to give way and let science, which is a universal interest, take its too long usurped place. Well, I stop to answer this challenge. I admit at once that, if such be the fact, if literature be a monopoly, and not a common good, then I lose my case. And I say more, then I ought to lose my case, and I am glad to lose my case. For I avow myself a democrat in this matter. I go with the people. I belong with the majority. I stand up for the benefit of the most. But is it true that literature is an exclusive, a seclusive thing? Is it true that the many can not enjoy it, do not enjoy it? Is not literature a general, a diffusive good? If not, then however great a good it may be to a few, I am not here to defend its cause. We are a popular association, this C. L. S. C., or we are nothing. If I did not believe literature to be a thing for everybody, I, as one among the Counselors of this organization, should favor a dismissal of literature from our plan and plead for the substitution of something else in its place that should be a thing for everybody. What is the fact?

Why, the fact is that literature is the very atmosphere, the intellectual atmosphere, in which we all, not some of us, but all of us, live and breathe and have our being. We drew in this air as soon as we began to think. Long before we could read for ourselves, before even we could listen understandingly to the reading of others, we felt unconsciously, but most really, and most profoundly, the effect, the beneficial effect of literature. The home in which you were reared, the character and the spirit of the mother that gave you birth, that nurtured and tended your infancy—these were different, and they were better, because literature had done something to make them and mold them. And were they not literature, those lullabies that quieted us in our cradle, the fairy tales that fed the fancy of our wondering childhood, the stories from the Bible that expanded our infant minds to embrace the idea of a God, of a Savior, of a future life, of heaven, and of hell? Those men seem not to know what their words mean; those men who talk of expunging literature, and bringing up the new generations of mankind on science. Really to do what they say, but what surely they never could intelligently mean, would be to destroy for the whole civilized race of mankind the very grace and glory of life.

I know very well that comparatively few out of any human generation ever become widely or deeply conversant with literature. It is but the one person out of ten, or a hundred, or out of a thousand it may be, that reads books. This I freely acknowledge. Nay, this I loudly proclaim. It is because this is so that the Chautauqua Literary and Scientific Circle exists—because this is so, and because it ought not to be so, and because there are at least a few of us that do not mean to have it continue to be so. Such, however, is undeniably at present the fact. Readers of books, take the civilized world at large, are few and far between. But no matter for that. What I have maintained is nevertheless true. Literature is a universal good. How many of you spend time in gazing heavenward at the sun? But you see by the light of the sun none the less. The sun lights the world in thousands and ten thousands of places where he does not directly shine. And literature is a sun. It blazes high in the heavens and spreads its beneficent illumination everywhere abroad among the haunts of civilized mankind. There are coverts, it is true, into which its rays can not immediately pierce. But even into such coverts its rays

enter. There is such a thing as diffusion of light by refraction and reflection and transmission. In this way literature becomes a light that lighteth every man that cometh into the world. A light, I say—for I use those sacred words with reverence. ONE is the light that lighteth every man. And, by the way, let us remember that it is greatly through literature, that is, through a book, *the book*, the Bible, that Jesus himself shines hither, across seas and continents of space and across centuries of time, to light us here as in a city in the wilderness to-day.

Of the hundreds of thousands of Englishmen of the present generation that have from time to time listened to the noble eloquence of that great orator, John Bright, perhaps not one in a hundred has ever read, for example, the "Paradise Lost" of Milton. But does it therefore follow that to these of the overwhelming majority the "Paradise Lost" of Milton is nothing? Far from it. John Bright has acknowledged his vast debt to the poetry of Milton for the enrichment of his own gift of speech; and through John Bright, Milton's poetry has thus become a real, an appreciable good to all the hundreds of thousands of men that have fed on John Bright's eloquence, though they may never have read for themselves a line of Milton's magnificent and inspiring verse.

This is but a single, and it is of course a very inadequate illustration. Every sermon you hear, every lecture, every speech, every newspaper you read, owes something, and something that it could by no means spare, to the beneficence of literature. Take away the light of literature from the world of mind—why, it would be like putting out the sun in the heavens. The very men who talk of such a vandalism, such an unspeakable, such an anachronistic vandalism, these very men would grope as in Cimmerian darkness. I will tell you what the effect would be like. It would be like suddenly annihilating all the civilized inhabitants of the world and endowing the unreclaimed savages of waste and wild with the powers and appliances that centuries of science have accumulated for the service of mankind. Imagine, if you can, the Hottentots and Caffirs and Ojibways remaining uncivilized in character, but equipped with the material apparatus of civilization. Would you like to live among them? What sort of use, think you, would they be likely to make of their magnificent acquisitions? But a thought like this is associated rather with the second than with the first of our reasons for regarding literature as a true good of human life. To this second reason we presently make our transition; first, however, let us fix it firmly in our thought that literature is no narrow, no exclusive interest, but an interest as broad and as expansive as is civilization itself. The fact that literature is in character such, is capable of being made clear by additional illustration. The city of New York is supplied with water from the Croton river. Every inhabitant of the city enjoys the benefit of this water supply. There is a system of aqueducts ramifying from Croton river to every street, to every dwelling, to almost every room, in the great metropolis. You have but to apply your hand, and instantly at that silent sign, Croton river flows to meet your demand. For it is not water simply, it is Croton river that is brought thus within the reach of every one that will have of it. So it is with the distribution of effect from literature. The conduits of literature run everywhere. The current flows to every mind within the bounds of civilization. Men may not know this, but they share the blessing all the same without knowing it. There are, I suppose, plenty of people in New York, who, when they turn the faucet to their water-pipe, not once dream that the fountain which they see springing as if by magic under their touch, is a true river brought from forty miles away. But true river it is nevertheless. Certainly not one in a hundred thousand of New Yorkers has ever tasted of Croton river where it flows in its natural bed. But they taste Croton river for all that, every time they drink water in New York. And thus it is that, how-

ever little men think of it, they still do share the benefits of literature with almost every breath of larger intellectual life that they draw. To the original sources of literature, the great books, ancient or modern, they may never have directly resorted, never even have seen them from afar, nay, never so much as heard of them; but they drink from them all the same, every time they take in a thought or a fancy, however brought within their reach, that once sprang up first in some great human brain, and was then immortalized in a tale, an essay, a history, a poem.

Thus much for the extent or quantity of the influence for good to men exerted by literature. It certainly is not too much to claim for literature that it is an interest broad enough in its range and reach of power to be called a general, if not a universal interest of civilized mankind.

We have next and last to consider the kind or quality of this expansive influence. As I have said, it is not to most men a material good. Only to those who live by literature, to those who make books, to our men and women of letters distinctively so-called, is literature a material interest. To the vast majority of us all, literature is chiefly a spiritual, an intellectual, a sentimental good. This I fully admit.

But I am far from admitting that because this is so, therefore literature is less a real good than anything else whatever, no matter what, the most solidly material interest of mankind that you can name. For what is our life? It is no doubt partly animal. We need, first of all, to subsist somehow, and then, if possible, to subsist comfortably. Beyond these two ends, subsistence and comfort, our animal nature has little or no craving. Give us a chance to go on living, and living with comfort, and we as animals ask nothing more. Science greatly helps us to accomplish these ends, and for so much we owe to science a large debt. But beyond this limit what does science do for us, for us, I mean, the generality of mankind? I wish to be perfectly candid and to concede to the claim of science everything that is justly hers. But what, I ask, beyond helping us live, and helping us live comfortably, does science even aim or aspire to do for the majority of the human race? For the scientists themselves, I acknowledge, for that comparatively small number of men who engage in the pursuits of science as a business of their life, science does much more. For these men science affords a means to vast enlargement and ennoblement of mind. The brilliant hypotheses, the bold speculations, the broad generalizations, the stimulating guesses, the expansive conceptions, with which science deals—what can be thought of more fitted to feed the imagination and reason of man and advance him to the strength and stature of angels than is such occupation of mind as these afford? And then no doubt also, mere patient observation for the collection of facts is a work more humble, indeed, yet worthy to be reckoned a true discipline and reflection of the intellectual nature. But then we are to remember that these relations to science are for the few and not for the many. The many simply enjoy the material fruit without enjoying the glorious intellectual quest that finds the fruit, do you say? Yes, but the many may enjoy the ennobling effect upon the intellect of those large conclusions to which science leads the scientific man. This, I concede, is to some extent true, but it is not true to any very considerable extent. And to the extent to which it is true, literature is largely the means through which the effect is produced. The great results of science, satisfying, inspiring as they are to those who first come at them, and to those others who really appreciate them as literature, by eminence, presenting them in her own admirable ways, is able to make them appreciated—these great results, I say, of science, tend when taught as lessons in the text-books of the schools, to become mere lifeless commonplaces of knowledge and of thought—mainly barren of force to quicken and fructify the mind. It has been said, and truly said, that the average American school-boy of to-day knows at twelve more true

science than the wisest philosopher of Greek or Roman antiquity could ever by possibility have learned. But, as has been replied, and truly replied, it by no means thence follows that such a school-boy is wiser than was Plato or Aristotle. It is not what you know, it is what you are, that chiefly signifies. And what you are, in that which is most central and most important, literature does more, far more, to make you than lies within the utmost reach of science; that is, if you are an average man, if you are one of the majority, and not one of the elect few who follow science as the vocation of a life. This is what I claim for literature, and this my claim for literature I acknowledge myself under obligation to make good by something beyond mere confident assertion of the fact.

I do not undervalue comfort. I like to be comfortable. I like to see people comfortable. But there are two sorts of comfort—one is comfort of the body, and one is comfort of the mind. These two kinds of comfort react mutually on each other. That is, bodily comfort tends to create comfort for the mind, as also does comfort of mind to create bodily comfort. But of the two kinds of comfort one is a great deal closer to us, and a great deal more durable than the other. If I had to choose between them I should not hesitate a moment. I should say, give me a mind at ease. The mind is master after all. Who has not seen men and women stretched helpless and hopeless on the rack of bodily pain, but triumphing nevertheless into peace and joy? That was the victory of mind. It makes far more difference to us, for our comfort, for our happiness, what is the course of our thoughts, our fancies, our affections, than what is the course of our bodily sensations. A sweet thought, a sovereign affection, a ravishing vision of fancy may make a man forget hunger, thirst, fatigue, pain. But no amount of physical comfort can ease you of anguish fastened upon your mind. That clings and stings in spite of all, and poisons all.

Science can do much for me to promote my comfort of body. True, however much she does, I am so constituted that immediately I want a little more. Comfort might perhaps be well enough defined as perfect balance between desire and supply. Only there never is in bodily concerns any such balance. We always want something more than we have. This sense of need constantly surpassing supply is the very spring of progress in civilization. Civilization has been wittily said to consist in the multiplication of artificial wants together with a corresponding multiplication of artificial supplies for those wants. But in view of the fact that want forever outruns supply, a change might not inaptly be made in this French definition of civilization. We might say that civilization is an endless process of multiplying wants and of then multiplying appliances that never will satisfy these wants.

Now, I am in favor of material progress. I am not one of those who think that the simplicity of savagery is better than the artificiality of civilization. No, I say, let us be as civilized as possible. Let us make all the progress we can. Let us go endlessly on in finding out God's great universe, and so realizing that mastery once divinely bestowed on man over the powers and capacities of nature. Let us do all this with heart and hope, but let us at the same time recognize the fact that never so shall we obtain immortality, never so obtain exemption from ill. Our world will still be a world of human infirmity and human suffering, however much the physical framework of things is put by science under, our control. In truth, it may well be doubted whether of real comfort, the sum is greater to men now, over and above all deduction, than it was a century or centuries ago. The appliances and means of comfort are more now, perhaps a hundred fold. But so too are the needs that must be met. And the difference of real comfort in favor of these times would not be found great. I repeat that I am not a reactionist. I want no retrograde movement, but, on the contrary, only advance, and ever advance. Still, whatever the advance, there will be, proceeding from that

advance, no corresponding advance in solid human comfort and happiness.

The reason is that human comfort and happiness depend in the main on conditions that science can not supply. They depend on the state of the mind within. They depend on the habitual or prevalent course of thought and feeling in the soul. What we chiefly need is not easier and more comfortable subsistence—though this too is good and desirable—but a released and victorious mind. We shall never escape our physical conditions, and these will always be more or less unsatisfactory. We shall rub against the bars, we shall press against the pricks of our material environment and suffer. This is inevitable. But there is for us something better than escape from physical limitation would be, were such escape possible. We can live a life of the mind that shall be, to a great degree, independent of the life of the body, and ascendent over it. Even let our hands be filled with mean and sordid tasks, we may, as Mrs. Browning puts it in her verse, keep our souls "singing at a work apart." The mind is its own place—and its own environment. In this fact lies our hope. And here is the great chance of literature.

Literature comes to us in our prison, and brings deliverance that is more than deliverance. It brings large thoughts to us, solvent affections, free fancies. We forget our bondage and our pain. We live a life of the mind that soars, as the bird soars, above the ground where else we should crouch and grovel. And I say that this is a real, a solid, a substantial good. Sentimental it is—yes, but our most true life is sentimental. Morton did for us, I suppose, a valuable service when he discovered the use of ether as an anæsthetic. That discovery has mitigated many a physical pang. But it is to me certain that Longfellow's poetry, for example, has done not less to bring comfort to men. Pasteur, the great French savant, has, it is said, found a specific by inoculation for hydrophobia. That is a vast boon to our kind. The same great scientist explored the disease that was destroying the silk worm in France, and applied an effective remedy. He performed a similar service in the rescue of the cattle from a widespread and destructive malady. Pasteur, by such achievements as these, has added untold millions on millions of dollars to the material wealth of the world. I glory and joy in these beneficent results of science. Human existence is blessed thereby. But blessed not less is human existence by the great literary gift of such a body of poetry as Tennyson's. You can not count in millions of dollars the wealth of the world received from Tennyson, but God can count it in heart-throbs, and in stirrings of the brain, too costly and too precious for countless millions of dollars to buy.

Blessed, I have said, is human existence in the beneficent results of science. But how blessed? What are we rich for? Why is it a good that we should possess a surplus beyond the necessities of subsistence, of subsistence in material comfort? That we need not work so hard to live, that we may have some privilege of leisure? But how is leisure a blessing to our race? By giving us a chance to be idle, to be lazy? I trow not. Leisure is a good to us when we use it well, not otherwise. It is not using leisure well to spend the time and the strength saved to us through science from the sordid demands of mere subsistence—getting, in accumulating appliances of pleasure. We may indeed accumulate the appliances so, but we shall never so accumulate the pleasure. God has planned it for us otherwise. Comfort turned into luxury ceases to be comfort. What then shall we do with our leisure when, at the gift of wealth through science, we have gained our leisure? We must not squander it in luxurious ease. Wealth so used would be not a blessing, but a curse.

No, wealth is a blessing to us only when we say within ourselves, now that we need not work all the time to keep soul and body together, now that our body is sufficiently well served, go to, let us see what we can do for our soul. I am not preach-

ing to-day, and I utter not a word about religion for the soul. But, apart from religion, what is there that you can do for your soul, that is, for your self, better worth doing than to feed it with thought, with reason, with emotion, with imagination? What does your release from drudgery signify to you, if it does not signify opportunity to live freely a life higher than the life of a brute? The good that science accomplishes for us is in itself an imperfect good. It is merely means to an end. We are defeated if we stop with the means. We must go on by the means to the end. Science is chiefly good as science makes way for literature. Let literature come in through the door that science opens.

Make free and wide your mind to the expanding and ennobling influence of literature. Every time you read a great book, you grow. And growth is life, and life is power, and power is joy. Literary culture is a process of intellectual annexation. You read, and you annex province after province of thought and of experience to the realm that was yours before. There is no limit to this expansion of empire. It is not simply during the intervals while you are reading that you establish new currents of intellectual life within you. What you read remains a permanent possession. Do not say, No, my memory is poor, I can not retain what I read. But you do retain it—in effect. It has gone into the substance of your mind. Your mind is now of a different texture. Your horizon is extended. Before, you dwelt low in a valley shut in by narrowing hills. You saw only what was immediately around you. You have a higher point of outlook now. Your landscape is wider, more various. But there are yet higher heights to be won. Go on and up. What an inspiring thing it is to stand in the Alps, where there is nothing visible to overtop you but the sky itself! Toward such an experience, in the realm of mind, literature invites you.

There is no exclusiveness, no monopoly here. You are all invited. Homer, Virgil, Dante, Milton—these are not for one, or for a few, but for all. Socrates will talk with you, and Plato and Aristotle. Demosthenes will repeat his peerless eloquence for you, and Cicero, and Chatham, and Webster. It is a glorious fellowship. Here are Æschylus and Sophocles and Euripides, here are Herodotus, Thucydides and Xenophon, here are Horace and Juvenal, Livy and Tacitus. All ages and all races are yours. You may be wise with the wisdom of time. Who would be content to live his own individual life alone, when, to each one of us all it is open to live, as it were, the whole life of mankind? And this is the gift of literature.

Let us be thankful that it is impossible for them to take away from us the "Iliad," the "Æneid," the "Divina Commedia," the "Pilgrim's Progress," the "Paradise Lost." These great works and their fellows are ours forever. And there are more and ever more such works to be created and enjoyed. Literature is indestructible. They may depress it, but they can not destroy it. Always, however much we may enjoy knowing nature, we shall at least as much enjoy knowing man. And it is in literature that man speaks to man. And never will come a time when there shall not be souls that must speak, and souls, too, in still greater number, that can not but listen.

Literature, then, is a true good of human life, both because, first or last, it addresses all, and because it speaks to that in all which is highest, most permanent, most controlling. Did I say I would claim for literature nothing more than equality of place with science? Let me unsay that. Science is knowledge, literature is wisdom. As wisdom is better than knowledge, so greater than science is literature.

THE AFTERNOON SERVICES.

In the afternoon the presentation of diplomas took place in the Amphitheater. The services were most interesting, many excellent addresses being delivered. A very interesting feature was the presentation of a Class Memorial by the '84s. This memorial is to adorn the walls of the new Hall of Philosophy,

and consisted of the portraits of President Lewis Miller and Superintendent of Instruction, Dr. J. H. Vincent. After the unveiling of the portraits President Miller was introduced and said:

Chautauquans, and especially the Class of '84:—The name Chautauqua is now among classical words, and various definitions of it have been given, and, until its meaning is fully known, definitions will be given. You will therefore allow me to give a few definitions, so that this classical word may fix itself upon your minds and hearts, and its spirit may ever be with you. What does it mean? In its crude form I will not say, but in these last few years, and since this Assembly began, it has come to mean a place where God is all and in all; it means a place where caste, sectarianism and denominationalism are unknown; a place for formulating all kinds of moral forces; a place of rest, of proper rest, and physical development; a place to inspire mental culture—in short, a place for the consecration of all of man's possibilities for good, and to prepare men to go out to the world to do good. These are some of the definitions, and you do not wonder, when you are here, how various and how broad the outlook is, an outlook so broad that I fear many times we become discouraged because of its breadth, and give up in despair. I am glad to see this afternoon that there are many here who have not given up.

Now, for your encouragement, let me say a few words. Suppose that the world should stand still for sixty years, and you had no more teachers for the young, that all teaching stopped, and those who now have the ability to teach, those who now have the skill to work in the mechanical arts, or to take that scientific field we heard of this morning, passed away, and there should be no more students or apprentices for sixty years, what would be the result? Taking this country as a guide, we would have but one million people who are in any vocation. This is an astonishing fact, taken from the census of the United States, as I gathered it some time ago for another occasion. Now, take the other fact: in 1880, twenty-six millions of the American people—more than one half of the inhabitants of the United States—were below twenty-one years of age, and had not taken up any vocation or any purpose in life. Chautauqua puts within your reach a privilege. I saw a man among your number this morning who was eighty-four years old. With that exception, few of you are sixty. There are not so many gray hairs here as there were this morning. In sixty years many of you will have gone; most of the men you find here on this platform will have gone, and you will have the privilege of taking their places. We sometimes think we have no place, there is no use trying to become anything because all these places are filled, but before you are sixty years old you will have the privilege of coming up through these avenues and taking any place you are able to fill. These avenues will be open to you. See what privileges you will have. I will give you the figures. You will have sixty-four thousand chances to take the rostrum or the pulpit; you will have eighty-five thousand chances to take a place in medicine; you will have two hundred and twenty-seven thousand chances to be teachers or scientists. All others will have given way before you. Now, do you think it worth while to struggle to become something? We can not all go through the schools, but by this new Chautauqua Idea we can gather together, and put our hearts together, and in this way gather some ability that will be consecrated for good.

Dr. Vincent then announced Dr. Lyman Abbott, one of the Counselors of the C. L. S. C., who spoke as follows:

ADDRESS OF REV. LYMAN ABBOTT, D.D.

Mr. Chairman and Fellow-Chautauquans:—The Circle, you know, is symbolic for the conception of perfection. The C. L. S. C. stands, therefore, by its very title, for an inclusion of all knowledge. Dr. Wilkinson this morning dealt with one half of that Circle, literature. There is nothing to be added to what he said this morning, for certainly I would not detract anything

from what he said, if I could. The praise that he awarded to literature as a means of education was well deserved, as it was well given.

I thank him for having left us for this afternoon the other half of the subject, and I want to say something to you about science. And I approach it from the side of ignorance, not as a scientific man, but as one whose education in youth, and ever since, has been neglected on the scientific side, and who looks at science from the point of view of desire and aspiration, not from the standpoint of satisfaction and achievement. Certainly science has done a great deal for us in the mere physical and material realm, and of that aspect Dr. Wilkinson spoke this morning. It has enlarged, if not our comforts, certainly the material of our comforts. It has enlarged, if not our satisfaction, at all events our content. It is to science we owe the fact that we have so largely increased the facilities also for our learning. Science has made for us voyaging and travel easy; science has bound the different parts of our nation together with iron bands; science enables us readily and quickly to communicate with one another; science has formed our houses, preserving us from cold; science has illuminated our houses, and redeemed from darkness and night the hours that can be given to social intercourse and study. In innumerable ways, science has added to our material and moral well-being.

But it is of science as an educator that the words I have to speak this afternoon are to be directed. I am sure nature has another aspect than that of a mere servitor, and is a material educator. So science has another aspect than that of adding to our mere material and bodily comfort. Science ministers also to our intellect and our spirit, like literature. I shall not undertake to put these in the balance, each over against the other, and see which is the better of the two. Now, it is scarcely necessary for me to point this to you who are pursuing both literature and science, that both of these develop the mind. Science as well as literature develops the soul and the spirit of man, the inner life. Science is teaching us to observe. It is teaching us other things, but that is all I wish to say to you this afternoon. It is teaching us to observe—how to use our eyes. It is astonishing how many men and women there are in this world who do not know how to use their eyes. Science is making us observant of the minuter as well as of the grander of God's works. The motto of the C. L. S. C. stands on the wall before you, "We study the Word and the Works of God." The word written in man's heart, that literature opens to us; the works that are written on all nature, that science opens to us.

I go out for a walk on the Catskills; I look off, I see the view, the trees, the June aspect. But there is a scientist who walks by my side. He points out to me the little scratches in the rock, and tells me it is the path of the glacier, that here where I am walking the glacier in the centuries long gone by made its march, and that there were higher mountains here then than now, and there was a sea in the valley below, and here are the marks, the footprints of it. He takes his hammer, breaks a rock, and points out to me a trilobite. He tells me that all these rocks are rich in the remains of animal life, they are filled with the remains of those animals which have disappeared. He is seeing what I did not see, what I did not know, he has learned to use his eyes, he is teaching me that I am as one who, having eyes, sees not.

One does not need great apparatus to become in some small measure at least, a scientific observer. I was brought up as a boy to think, whether my teacher's fault or my own I do not know, that the only use of my eyes was to read books, and I read them. But the great book in the midst of which I was living I never read. I know of some boys in my home who have furnished themselves with some naturalists' pins, some cork, one of those boxes of drawers made to hold spools—such as you see in any dry goods store, and which you can get for a "thank you;" they have provided themselves with a pole and

a net, and now, when they go out into the woods, it is not for frolic, or waste of time. They see a bug or butterfly, they out with the pole and catch it. They are filling a museum. When they catch their butterfly, they come home with more questions about him, where he comes from, than I can answer. Whether their museum comes to much or not I do not care. They are learning to read that literature that comes before all books, the literature that God has written in the clouds, in the rocks, in the mountains, and in the flying things.

But science teaches us more than that. It teaches us not merely to observe with our eyes, but with our inward nature. We do not simply see works. "The earth is the Lord's, and the fullness thereof." You do not know a library because you know the names of the books that are printed on the backs of them, and you have not begun to know science because you have begun to gather a few isolated facts out of the heaven above, or the rocks beneath, or the trees. Not until you have learned what is in the books do you know literature; not until you know what is the truth that lies behind nature and palpitates within it, do you know science.

The crown that is upon the brow of science is composed of stars, every one of which is a star from God's own heavens, and the hieroglyphic roll she has in her hands, which we strive to read, is God's own words, no less than the printed book, from which we study of his word and his works. Science and religion stand at the door of God's great temple, beckoning with one hand to those who stand without, and with the other pointing to Him who sits upon the throne within.

Dr. Vincent then read the following letter from Counselor Gibson, of England:

LONDON, 15th July, 1884.

MY DEAR FELLOW STUDENTS:—The pressure of engagements, which is usually at its height in the month of May, and begins to relax as June advances, has this year continued much longer than usual, and threatens now to traverse the month of July; but I must not again disappoint my dear brother, Dr. Vincent, by postponing my letter till too late, as I unhappily did last year, for which I ask his pardon, and yours.

I congratulate you, with all my heart, on the work of the year, and on the wonderful growth of our Circle. How speedily has the little one become a thousand, and many thousands!

I can not say that the Chautauqua Idea, pure and simple, has as yet taken root in England; but there are approximations to it, and the principles of which it is an embodiment are everywhere gaining ground. To my mind Chautauqua stands for the keeping together of many things which God hath joined, and which men are too apt to put asunder. First, I think of holiday recreation and wholesome study which many imagine to be mutually destructive, whereas our experience proves them to be mutually helpful. Well, the people here are beginning to appreciate this. In connection with the great "Fisheries Exhibition," which was the chief novelty of the London season, last year, courses of useful instruction were organized; and this year, as an important part of "The Health Exhibition," which has taken its place, lecture courses, bearing on important branches of sanitary science, have been delivered, and a number of useful little manuals, like those with which we have become familiar in our Chautauqua course, have been issued, one of them by Mrs. Gladstone.

Then, I think of secular and sacred culture, which there has been quite too much disposition in our day to separate, and which are, in my opinion, so happily combined in our studies. Here I am reminded of the recent great Sunday-school meeting at Exeter Hall, which I had the privilege of addressing, where the chair was occupied by the Hon. A. J. Mundella, who manages with such ability and energy the educational department of the government. Mr. Mundella, who has risen from a very humble position, had the foundation of his education laid in the Sunday-school, and a night school connected with it, and when very young, received much stimulus and encour-

agement by the presentation of a Bible for proficiency in his Sunday-school lessons. He does not forget his obligation, and his speech that evening from the chair was eminently hearty and satisfactory. I am reminded, also, in the same connection, of an important meeting held recently in the Jerusalem Chamber, a private meeting, from which reporters were excluded, and which, therefore, I must not report to you further than to say that it was a representative gathering of leading men of all denominations, including some distinguished Roman Catholics, (one of whom, by the by, made the finest speech of the evening), to consider the question whether it was possible under a system of State Education in a country like England satisfactorily to combine secular and religious instruction.

And this suggests another of our pleasing combinations at Chautauqua, the drawing together, not only in fraternal feeling, but also in important work, of Christians of different denominations. I need not say that the current of the times still sets in the same direction. The meeting in the Jerusalem Chamber, above referred to, is an illustration of it; and as a farther indication I may refer to the fact that recently the rector of St. Paul's, Cheswick, after due announcement, preached and conducted divine service for Mr. McLeod, successor to Dr. Cumming, of Crown Court. He did it with the full knowledge that it might get him into trouble; but he was willing to have the question tested at his expense. Considerable notice has been taken of it in various ways, but no one has ventured to make any complaint.

I take it that one prominent feature of the Chautauqua movement is the desire and endeavor to bring those privileges which have been hitherto to a large extent the possession of the few, within reach of as large a circle as possible—the attempt to bring the scholarship of the scholarly into far closer relations with the wants of the people. And here I am reminded of the new Oxford movement, of which you have no doubt heard—the resolution of a large number of young Oxonians to devote themselves to work in the East End of London for the educational and social amelioration of its wretched poor. The plan involves residences among the people and brotherly intercourse with them. It remains to be seen, whether, without those high Christian motives which have always been found necessary in the past, but so far are not at all acknowledged, there will be that “patient continuance in well-doing,” without which nothing worthy can be accomplished. But whatever may be thought as to the probable success and permanence of the movement, it is certainly a most gratifying sign of the times.

But I am allowing myself to drift into a treatise *de omnibus rebus et quibusdam aliis*, and must therefore call a halt, and come to a period, which I do with renewed congratulations for the past and hearty good wishes and earnest prayers for a happy holiday season, and a prosperous and fruitful year of work.

I shall not sign myself your Counselor, though you honor me with the title, for I am sure that any counsel I can give at this vast distance is of very small account, but I do heartily call myself your sincere friend,

JOHN MONRO GIBSON.

Many kind letters of greeting and encouragement were read. No one stirred a deeper sympathy than that from Mrs. Abbey Gough, of Westfield, N. Y., the senior graduate of the C. L. S. C.:

“Although I am too feeble to be with you to-day, and although I am nearly eighty-four years old, I am with you in spirit. God bless the C. L. S. C., and God bless the Class of '82.”

Dr. Vincent said: “This dear woman marched in through the gate when eighty-two years of age; her son of over fifty, or about fifty, behind her; his daughter of twenty, perhaps, behind him; three generations in that Class of '82. She still lives, at the age of eighty-four, to give greeting on this glad day.”

The letters were followed by the reports from the assemblies, after which Dr. Vincent addressed the Class of '84 as follows:

ADDRESS OF DR. VINCENT.

To the members of the Class of '84, a few words. I have watched your progress during the four years with peculiar interest. You have gained to yourselves a reputation as a class noted for zeal and earnest work in the C. L. S. C. You are known as “The Irrepressibles.” You have been characterized by an ingenuity in devising methods. In making up the history of the C. L. S. C. there are several things that may be traced to you. You number in your roll some distinguished names. You have throughout the entire extent of the Circle labored with peculiar diligence and fidelity for its general good. I am sure that the Class of '82, and the Class of '83, whose experience made it possible for you to be what you have been, will not complain of the tribute which at this time I seek to pay to you. I know that the other classes will follow your lead, and be glad if they can have the good reputation which attaches to your name, the name of the Class of '84, the “Irrepressibles” of the C. L. S. C.

There are some of you who are young, in the freshness and brightness of life, with youth's outlook. May it be a long time before the grave folds its arms about you. May you do valiant service not only in the cause of the C. L. S. C.—that were a little thing—but, using it as a platform, may you accomplish large things and worthy in the homes you represent, in the community of which you are a part, in the branch of the Church of the living God with which you may be connected, and may your impress be felt on the national life. Above all, may you do good work in God's way, by the divine process in your own lives, that as the years go by you may build up character that shall shine as a light on the world, character that shall endure through the eternities.

Some of you are in middle life. Aches, and pain, and signs of breaking down once in awhile, make you stop and think. You wish that you could recuperate, and get back some of the old power. Probably you will. You have yet ten years, twenty years, thirty years, in which you may do splendid service. May God's blessing through this ministry enrich these remaining years, and make you glad, and your friends glad, through every succeeding year, that you were ever identified with our Circle.

Some of you are old. You do not like to have that stated; or do you? You do not feel old: eighty-four years is nothing. May the venerable members of our Circle, who count from—where *does* old age begin—from eighty-four and above, may you live until the new century shall dawn, and may your last days be your brightest and your best days. You do not know, you men and women of advanced years, how it warms our hearts to see you in this presence and engaged in these services. We have for all time glorified childhood. I can never allow a youngster to pass me without a salutation. There is only one place where I do not like to hear a child's voice, and that is when it interrupts a public service. I take great delight in these little fellows whom we meet in the streets, at the front doors, and in all American homes everywhere. But I think we have glorified the possibilities of childhood to such an extent that men and women full-grown have come to think that all the possibilities of life are hidden in the earliest years. When we see men and women of advanced age coming to this place to receive the reward of four years' work, with ambition for years to come remaining, we feel that the possibilities of this life are not limited at all.

And when we remember, as the poet says, that death is “but a gray eve between two shining days,” there is no limitation to man. Therefore, work on, work forever. God help us to begin in this life, that we shall make everlasting progress as we enjoy the fellowship of the saints in the presence of God.

So, then, my young friends of eighty-four years and under, I bid you welcome to-day to this place, and as President Miller shall authorize the distribution of the diplomas which you have

won, we shall take pleasure in handing them to you. We expect one of these days to see them glittering with seals, new seals freshly won, placed on the pyramid. When you are asleep in the long sleep, the diploma shall hang on the wall—a tribute to your ambition and faithfulness.

The class song of '84 was sung, the diplomas were distributed to the graduates, and the Commencement services of the Class of '84 were at an end.

FRAMINGHAM, MASSACHUSETTS.

There is no part of the world where the C. L. S. C. thermometer runs higher than in New England, notwithstanding the current opinion as to the general iciness of that region. The members of the circle in the six Eastern States are as enthusiastic in their loyalty, and as ardent in their manifestation of it, as any other section on the planet. This was abundantly shown at the fifth session of the New England Sunday-school Assembly, held at Framingham, Mass., from July 16 to 26, under the direction of Rev. Dr. Vincent, assisted by Rev. A. E. Dunning and Rev. J. L. Hurlbut, D.D. The work under the auspices of the C. L. S. C. was most promising.

The C. L. S. C. is a circle with several centers, hence no one will be surprised to learn that at Framingham there was more than one headquarters. At a modest little cottage with one room, Rev. and Mrs. O. S. Baketel conducted the business of the Circle, enrolled names, received fees, distributed circulars, furnished badges, and answered questions innumerable. But besides this, every class had its own headquarters, where the class register was kept and where members met for acquaintance and conversation. Of course the Irrepressible '84 trimmed up its tent, and attracted general notice; but its example was soon followed, and it was hard to say which of the classes kept itself most prominently before the eyes of the people.

The Round-Table was held in Normal Hall, which was crowded with members at every session, and brilliant with badges, for at Framingham every C. L. S. C. wears the colors of his class. At the opening Round-Table Dr. Vincent presided, and a spicy discussion on the question "What is Education?" was participated in by many speakers. The second meeting, in the Superintendent's absence, was conducted by Dr. J. L. Hurlbut, who wrote on the blackboard the words, "What good is the C. L. S. C. doing?" A rattling fire of answers, fifty in number, was shot off from the seats faster than the nimble pen of the reporter could take them down. Perhaps in some future article we may present some of them to the readers of THE CHAUTAUQUAN, as handy arguments for use in working up an interest in the cause. Other Round-Tables were held, alike in the enthusiasm and the interest, though differing in their subjects. New England is a land where everybody speaks in the town-meeting, and the Round-Table of the C. L. S. C. is no exception to the general rule. The camp-fire was more systematically conducted than is usual at assemblies. On the evening appointed, each class met at its headquarters and marched to the Normal Pavilion. Here the procession was formed in order of classes, with the venerable veterans of '82 in the advance, and the infants of '88, organized on that very day as the "Plymouth Rock Class" as last in the line. The army, five hundred strong, marched through the darkness to a natural amphitheater in the edge of the encampment, where a gigantic bonfire had been already kindled. Here a circle was formed, the members in front, and a few thousand spectators peeping over their shoulders, and wishing that they were there. Songs were sung, and speeches were made by representatives of each class, beginning with the youngest, for which Rev. A. E. Dunning spoke, and ending with Rev. O. S. Baketel for '82, after which Dr. Vincent gave a few warm, uplifting words. Then two circles were formed, clasping hands around the dying embers. Within stood the class of '84, about to graduate, and around them their companions of

the other classes, all joining hands, while "Blest be the tie" was sung with deep feeling, a prayer was offered, and the benediction was spoken. This camp-fire was one where mirth, sentiment, thoughtfulness and religion were mingled in happy proportions. The class anniversaries formed a prominent feature in the Assembly. Every class had its organization; its headquarters was a place where social reunions were in progress nearly all the time; and in addition, each class, from '82 to '87, held its own anniversary, generally in Normal Hall, where speeches were made, poems were read, histories recited, prophecies predicted, songs sung, and the merits, general and specific, of each class in the C. L. S. C. over all the other classes, were duly presented to its own delight. Middle aged men and women showed all the enthusiasm of young collegians in the *esprit du corps* for their class organization. The Recognition Services were attended by nearly a thousand members of the C. L. S. C. and twice as many outside listeners. The procession, marshaled by Prof. Sherwin and headed by Dr. Vincent, "the distinguished guests," and the band, marched around the grounds to the Auditorium. Here the heroes of the day, the class of '84, occupied the platform, while the graduate and undergraduate classes filled the reserved seats in front. The Commencement oration was delivered by President Julius R. Seelye, of Amherst, on "The Power of Ideas." He was followed by Mr. John B. Gough, in a few remarks both witty and wise. Then Dr. Vincent, with a brief address to the graduating class, presented the diplomas to those present, one hundred and eighty-eight in number. We are conscious that our brief paragraph is a cold *résumé* of one of the most enthusiastic and glowing services ever held in New England. We must not forget to state that the New England C. L. S. C. have resolved to erect a Hall of Philosophy on the topmost summit of the hill in the Assembly ground. It is to be modeled after the classic building in St. Paul's Grove, dear to all Chautauquans, and will gleam from far, with its columns and white roof, inviting the passers by to climb the heights of knowledge by the paths of the C. L. S. C.

MONTEREY, CALIFORNIA.

The fifth annual Pacific Coast Assembly convened at Monterey, California, on Monday evening, June 30, 1884. The president, Dr. Stratton, was not able to be present at the opening of the Assembly, and Dr. C. L. Anderson, of Santa Cruz, vice president, took the chair and made the opening address. It was an admirable review of the studies of the year, a cordial greeting to all present, and an enthusiastic explanation of the Chautauqua Idea. His audience was a large and intelligent one. The hall was beautifully decorated with evergreens, flags, bunting, and the C. L. S. C. mottoes. The evening was one of rare beauty, and altogether the Assembly lacked nothing but the genial presence of a few of its usual leaders. The summer was unusually cool, and consequently there were fewer people at the coast than last year, but the Chautauquans turned out well, and there was a perceptible increase in the daily attendance over that of last year. The musical department was under the excellent management of Mrs. R. L. Higgins, of San José, and was a matter of great pleasure and congratulation during the whole session. Various clergymen were in attendance, and a brief devotional exercise opened each meeting. There is not space here for extended notice of the ten days' literary feast, but we will briefly recapitulate the points of interest. Miss Lucy Washburn, of the State Normal School, gave two admirable talks upon the "Circulation of the Blood," and two others upon "Methods of Bible Study," all of which were precisely what the audience liked to hear, and were as profitable as they were pleasant. Professor Moses, of the Berkeley State University, gave three historical lectures of great value, upon that period of Roman history during which Christianity became the religion of the empire. Rev. Dr. Mc-

Lean, of Oakland, gave a brilliant description of a recent trip to the Hawaiian Islands. Mr. F. B. Perkins, of San Francisco, talked wisely and wittily of "Methods of Historical Investigation." Mr. Adley Cummins lectured eloquently upon "What the Orient has done for us." Mr. Clee, of Berkeley, talked interestingly of the "Date Palm." Mr. Matthew Cook, of Sacramento, lectured upon "Entomology." Rev. Dr. Vance, of Carlisle, Penn., read a charming paper upon "Africa." Mrs. M. H. Field, of San José, had two papers, one upon "Holy George Herbert," and the other upon the "Women of Ancient Greece." Miss Jessica Thompson, of San José, also had two beautiful literary papers, one upon Shakspeare's "As You Like It," and the other upon Tennyson's "Princess." Mr. Joel Bean told of the "Council of Nice," and Dr. C. L. Anderson unfolded the marvels which lie in "A Drop of Water." Dr. Stratton gave the closing lecture—a most noble one—on "Potential Ideas." The Sabbath included in the session was devoted to Temperance, under the excellent management of the W. C. T. U. of California. There was a glorious sermon in the morning by Rev. Dr. Briggs, of San Francisco, upon "Woman's Work," a grand children's meeting in the afternoon, and a women's mass meeting in the evening, when Mrs. McCall, of San José, read an excellent paper upon "Temperance Education." Mrs. Browne, of San Francisco, the State President of the W. C. T. U., made a grand address, and others made brief remarks. Beautiful weather prevailed during the entire Assembly, and the utmost good fellowship. The regular business meeting was held on the afternoon of the 10th. The reports of the secretaries and treasurer were read, and an election of officers held. The old officers were reinstated, and various committees appointed. Rev. Dr. Stratton is again president; Dr. C. L. Anderson, Dr. Wythe, and Professor H. B. Norton, vice presidents; Mrs. M. H. Field, general secretary; Miss M. S. Bowman, Assembly secretary; Mrs. Eloise Dawson, treasurer. C. L. S. C. day was the closing day of the Assembly. It was as bright and sunny as could be desired, and all things were propitious. The Chautauquans gathered in the parlors, each distinguished by an oak leaf badge, and then marched two and two in long procession over to the Assembly Hall. There were but eight graduates present. Four graduating essays were read, all of marked merit. The general secretary read some clippings from her note book. Dr. Stratton made a brief address. Mrs. McCall read a beautiful memorial paper on Mrs. M. H. McKee, of San José, one of last year's graduates, and a most efficient and brilliant member of the C. L. S. C. The diplomas were presented, and then the Assembly adjourned to meet in the afternoon on Chautauqua Beach for a Round-Table talk and a mussel-roast. The names of the graduates present were: Dr. C. L. Anderson, Santa Cruz, Cal.; Mrs. Helen Dryden, Gilroy, Cal.; Mrs. J. A. Whitney, Gilroy, Cal.; Mrs. Lillian Shuey, Brentwood, Cal.; Miss Gussie H. Wilcox, Sacramento, Cal.; Mrs. Eloise Dawson, Mrs. C. P. Baily and Mrs. Eliza Mantz, San José, Cal. There are thirty others who have completed the course but who were prevented from coming to Monterey. The Round-Table on the beach was a lively affair. Some fifteen or twenty circles were represented, and all reported their respective circles as wide-awake and pursuing their readings with unabated zeal. After this exchange of experiences the Assembly laid aside its dignity and gave animated attention to the steaming mussels which were generously passed around by "the muscular committee." The tempting bivalves had been gathered by the bushel in the early morning, and at precisely the right hour laid upon great beds of coals in full sight of the Round-Table gathering. A bevy of young ladies assisted in serving the multitude, and a merry feast it proved. The California mussel-roast and the down-east clam-bake are convivial cousins. The Monterey Assembly closed its fifth meeting in peace and good will, and with the hope of many and many another summer school by the sunset sea.

THE PACIFIC GROVE RETREAT, 1884.

BY JOEL BEAN.

God of our lives—past, and to be,
God of the earth, the land and sea,
With all Thy works, we worship Thee.

In humble faith our souls would bear
To Thee our every weight of care,
And all the burden of our prayer.

But with what language can we raise
A fitting tribute to Thy praise,
And celebrate Thy works and ways?

Fresh blessings, countless as the sand,
Flow as perpetual from Thy hand
As do the waves upon the strand.

More deep and boundless than the sea,
Thy love from all eternity
Sides every inlet full and free.

On this Pacific shore we meet,
This Temple-Grove our pilgrim feet
Draws to its sacred calm retreat.

Make us to feel Thy presence near,
And with Thy goodness crown the year
Whose harvest fruits are offered here.

Our "Feast of Tabernacles" bless,
Hallow these tents and cottages
With peace, and joy, and righteousness.

A host from many a church and land,
We would, with loyal heart and hand,
For Christ our King united stand.

Thou who hast led us all our days,
O'er fertile plains and desert ways,
Be here an altar to Thy praise!

OTTAWA, KANSAS.

The Inter-State Assembly of Kansas, Missouri, and the surrounding states, was held at Ottawa, Kansas, from June 24th to July 4th, under the superintendence of Rev. J. L. Hurlbut, D.D. It was a large meeting, some estimating the aggregate attendance at fifty thousand different people, during the eleven days; and in every way successful, whether viewed as to the interest of its exercises, the thoroughness of the work done in its classes (which are the backbone of an Assembly), or the financial receipts, which are needful to maintain the institution. The C. L. S. C. is somewhat new at this Assembly, as it was first recognized in 1883, when only about twenty members were present at the camp-fire. This year witnessed a great increase in the interest. Several Round-Tables were held, and reports were received from twenty-eight local circles, aggregating over four hundred members, all of which were represented by members present. At the Round-Table discussions were held upon topics such as these: "What are the advantages of the local circle?" "How may the local circles be made interesting as well as profitable?" "How shall they be organized?" beside endless inquiries concerning the subject of "seals" which not even Dr. Vincent himself could always have answered had he been present. The camp-fire was held on Tuesday evening, July 1, and was a great success, since it not only gave delight to the members, but awakened an interest among the public present, and was followed by forty new members who joined the C. L. S. C. the next day, the advance guard of the class of 1888. After the evening lecture the members gathered in procession, marched around the encampment, and formed in a circle around the fire. Here the songs were sung, and addresses, brief and pointed, some grave and others gay, were made by Rev. D. C. Milner, of '82, the president of the As-

sembly, Mr. F. A. Hatch, (the member of '84 who was present), Y. M. C. A. secretary, of Kansas City, Rev. Duncan Brown, of St. Joseph, Mo., Mr. A. Zartman, of Kansas City, (a place which boasts of seven circles and two hundred members of the C. L. S. C.), Mr. E. A. Spring, our Chautauqua sculptor, and Professor W. F. Sherwin, who belongs to all the classes. At the close the hand-clasping circle was formed by the members, seventy-three in number, and a prayer was offered by the superintendent of the Assembly. The C. L. S. C. tide is rising at the Inter-State Assembly, and next year we hope to count our members by the hundreds. One minister, who with his wife had been reading the course alone, went home from the Assembly and organized a circle of forty members, ready for the fall campaign; and there are more to follow. It is proposed next year to hold a Recognition Service, and confer the diplomas upon such members of the graduating class as live between the Mississippi and the Rocky Mountains, and can be present at Ottawa.

WASECA, MINNESOTA.

While the opening exercises of the Inter-State Assembly at Ottawa, Kansas, were in progress a similar service was being held for the first time in a large pavilion on the grounds of the Maplewood Park Assembly near Waseca, Minn. The location of this new Assembly is delightful. It is on the high lands of Central Minnesota, about sixty miles south of the great cities of the Northwest, St. Paul and Minneapolis, and central to a large and wealthy agricultural region, in which within easy reach of the grounds are a number of thriving villages. The grounds consist of a peninsula putting out into Waseca lake and covered by a heavy growth of maple, beach and elm forest trees. The nucleus of a C. L. S. C. organization existed in a local circle in the village of Waseca. During the ten days of the Assembly several meetings were held, the plans of the Home College explained, converts made, and on the evening of July 1st the first camp-fire was kindled in the presence of a large audience. Addresses were delivered by Reverends Levi Gilbert, H. C. Jinnings, John Stafford, Dr. Emory Miller and others. The meetings were pronounced successful, and the prediction of still larger successes volunteered.

ISLAND PARK, INDIANA.

At Island Park Assembly, located near Rome City, Indiana, interest in the work and delightful associations of the C. L. S. C. began with the observance of the Sunday vesper hour on the Sunday preceding the opening of the Assembly. From that the enthusiasm and interest grew, reaching a climax on Chautauqua Day. A new hall had been erected on a beautiful point of land projecting into the lake, through the open window of which came the glint of sunset light and the rippling of wavelets on the beach to mingle with the voice of "Evening Praise." The Sunday evening vespers were among the most delightful and helpful religious influences of the Assembly. At the daily Round-Tables a series of brief lectures were delivered, three by Dr. Wm. M. Blackburn on "English History," two on "Biology" by Dr. W. F. Yocum, one on the "Study of Literature" by Wallace Bruce, and three on "Astronomy" by Prof. F. H. Bailly. "Chautauqua Day" was the red letter day of the Assembly. Early in the morning people began to gather, each train reinforcing the crowd, all eager to see and hear the "Commencement exercises." The Tabernacle was beautifully decorated with flags, bunting, flowers, oak leaf wreaths and festoons, the mottoes of the C. L. S. C., monograms and other devices. On the edge of the platform stood a representation of the "Golden Gate," under the arch of which the members of the class of '84, present to receive their diplomas, passed to their seats on the platform. The procession was of imposing proportions, the largest ever seen at Island Park. The oration was delivered by Counselor Lyman Abbott, D.D., and his eloquent words of counsel will not soon be forgotten. Six-

teen members of '84 received their diplomas. In the evening, after the Chautauqua vesper service, the night procession was formed and escorted along the illuminated way under arches on which the legends, "Religion," "Art," "Science," "History," "Literature" and "Philosophy" could be read, to the place of the camp-fire. Here by the light of a magnificent fire an hour was spent in singing Chautauqua songs, listening to bright and witty speeches, brief recitations and reminiscences of similar fires at Chautauqua, closing with the "Night Song" and prayer for light and blessing on members of the Circle present and absent.

MONONA LAKE, WISCONSIN.

Monona Lake Assembly promises to be one of the more important centers of C. L. S. C. work. The grounds are situated on the banks of one of the four lakes surrounding the capital city of the State of Wisconsin, and within a mile of it. Seventy-five passenger trains go and come each day, making the grounds accessible from all directions. In spite of rainy weather and low temperature the attendance this past season was large and enthusiastic. Daily Round-Tables were held and though often interfered with by other meetings and lack of a suitable and permanent place of meeting, were well attended and proved very interesting. Thursday, July 31st, was C. L. S. C. day, and about three hundred and fifty members participated in the Recognition Service. The oration was delivered by Bishop Cyrus D. Foss, D. D., the theme selected, "The True Education" was ably discussed and a source of encouragement to many members of the circle. The camp-fire was lit on the highest point of land on the grounds, and the spot thus dedicated was tendered by the Board of Directors as the site for a new Chautauqua Hall. A vigorous canvass of the State will be made in the interest of the C. L. S. C., and it is expected that a new and commodious hall will be erected in time for our next annual gathering.

LAKESIDE, OHIO.

This flourishing gathering of students, religious and secular, was preceded this past summer by a large assembling of the teachers of Ohio and vicinity, and the people were already admirably prepared for the direct work of the Assembly. The program was the finest ever enjoyed by the patrons of this place. In lectures and miscellaneous entertainments, as well as normal class and children's class work, it was not behind the best in every feature of such gatherings, and the promises for future years are most encouraging. Neither is Lakeside a whit behind its "old mother" of the fair Chautauqua Lake in enthusiasm on the subject of the C. L. S. C., although it necessarily lacks in numbers, and in the distinction which comes of being the great "head-center;" a distinction belonging, of course, to but the one place. But that all the people who have interests at Lakeside, and who come under the influence of its work, shall have something to do with this great reading circle, and get a measure of its benefits, is one of the intense desires and energetic aims of the Lakeside authorities. In accord with this purpose a day was set apart, as usual, at the summer session of 1884, for the recognition of as many members of the class of '84 as might be present. Chancellor Vincent was on hand and delighted the audience in the forenoon of the day with his lecture on "Our Minister," and in the afternoon held the special Recognition Services, delivering one of his characteristic addresses on this theme so near his heart, and moving his large company of hearers to increasing zeal in behalf of the movement. Quite a representation of the class were formally graduated. A large distribution of circulars relating to the C. L. S. C. was made, and hundreds of people who had not before come into direct knowledge of the subject were stirred into interest, and doubtless many are thereby now at wholesome work. Several Round-Tables were held during the Assembly, one by Dr. Vincent, on the evening of the Special day, another by S. A.

Wildman, Esq., and still another by Rev. B. T. Vincent, the superintendent of the Assembly. At these there was much interest manifested, and much more promoted, and evidences of good work within the patronizing territory of Lakeside were given. It is confidently expected that there will be a large representation of the Class of 1885 at the Recognition Services which are provided for in the outline of the program for the next year. And while, of course, all who can go to Chautauqua and graduate under the brilliant circumstances which attend the Commencement day there, will gladly do so, yet it will be in some degree a delight, if that is not possible, to graduate at this nearer point.

CRETE, NEBRASKA.

The Nebraska Sunday-school Assembly, held in August, at Crete, twenty miles west of Lincoln, Neb., aroused much interest in the C. L. S. C. A paper was read on the "History and Aims of the Circle," by Rev. W. B. Dada, of Stanton, Neb. Rev. A. E. Dunning, of Boston, president of the class of '88, followed with most encouraging words. Thirty-five persons gave their names as members of the new class. Badges were secured, and the freshman class is full-fledged for action. There were also a few representatives of the classes of '84, '85, '86 and '87 present. Three Round-Tables were held and many questions asked and answered. The interest seemed to deepen as the session advanced. On August 23 all the members of the different classes took a boat ride on the Blue River, and on Thursday evening, August 26th, held a grand camp-fire on the grounds of the Assembly, around which able speeches were made, cheering words spoken, and Chautauqua songs sung. After the exercises the Chautauqua salute was given in honor of Mr. F. I. Foss, of Crete, who the night before publicly gave the Assembly a clear title deed to all the grounds which it occupies, one hundred and nine acres, valued at \$7,500, a gift most noble and generous, accompanied with a condition as a spur for others to lend a helping hand, namely: that \$10,000 be raised for buildings and improvements. The next day the citizens of Crete generously subscribed nearly \$5,000. Thus we have a young Chautauqua out here in the far west, an infant child of but two years, but with the promise of a glorious future. Rev. A. E. Dunning, of Boston, Mass., is to be managing conductor next year.

MONTEAGLE, TENNESSEE.

Monteagle is about midway between the east and the west ends of Tennessee, on the south side. It is about 2,400 feet above the sea. The Assembly grounds are on the top of a plateau, and comprise about three hundred and fifty acres. On one side they are bounded by a precipitous bluff which goes straight down nearly a thousand feet. Monteagle is two years old. They have their Amphitheater, and they have a Hall of Philosophy, the pillars being the natural trunks of trees. There was present there this summer a mass of representatives from the Southern States. Electricity seemed to be in the air, and they gave salutes in a manner never excelled. On C. L. S. C. day Rev. Frank Russell delivered an address showing the design of the great Circle. In Mr. Russell's report at Chautauqua of the work done there he gives a pleasant description of the decorations, the gate and arches. "The Hall of Philosophy was not quite completed. The arrangement of the arches and the gate was a little crude. I visited the spot some time Saturday morning, and directed the carpenters how to make the gate. I regretted that it was not a golden gate, and that there was no time to gild it. The ladies said they would fix that. They took the 'golden rod,' which grows so profusely all around there, and when we went there in the afternoon in the mixed procession for the graduating class of '84, the gate was upholstered and really quilted in golden rod. It was a golden gate. We had the complete procession, and the children with the flowers. The diplomas were given and the Hall was dedi-

cated." One thing must be especially interesting to the C. L. S. C. there, and that is that the Assembly at Monteagle was not put to a dollar of expense for the building or any of the lectures before the C. L. S. C. They collected the money themselves, and their treasurer disposed of it. When they completed the Hall of Philosophy there was a little money left in the treasury. In the evening they had a camp-fire at the end of the Hall. It was a beautiful cone of flame which stood until it was all consumed. The speeches were of a high character, without preparation, thoroughly spontaneous.

ROUND LAKE, NEW YORK.

Round Lake is located very near Saratoga Springs, twenty-five miles north of Albany. In 1878 Dr. Vincent inaugurated Sunday-school Assembly work there, and since that, with one exception, it has been kept up. C. L. S. C. work has spread over the eastern part of the country very rapidly. Its tidal wave caught the Round Lake people and bore them on to high tide, and has kept them there ever since. They have thrown much energy into their labors. The C. L. S. C. is a one-ideaism. On C. L. S. C. day at Round Lake they were fortunate in having Counselor Wilkinson present. His address was able. They are planning to do better and better, and expect to stir that whole section by another year.

LONG BEACH, SOUTHERN CALIFORNIA.

To accommodate the growing circles of the C. L. S. C. a regular Chautauqua Assembly has been established at Long Beach, Southern California. This locality, after deliberation, was chosen as being central and accessible. It is twenty-two miles from Los Angeles by rail, on a splendid ocean beach ten miles long, where tourists and invalids may enjoy surf bathing the year round, with all the accommodations of civilization, in a mild climate, tempered by the ocean in winter and summer. Six months ago Long Beach was little more than a sheep ranch. Now it has a great hotel, and lesser ones, forty cottages, and over a hundred tents. Artesian water is brought three miles and delivered in iron pipes on many streets. On the 21st we had a regular field day, and good audiences. At 10 a. m. a lecture on the "Chautauqua Idea" was delivered by Dr. Clark Whittier, of Riverside, and other speakers. At 3 p. m. a regular Round-Table was held by Rev. S. J. Fleming, of Ontario, California, and a masterly lecture by Prof. G. F. Bovard, of the University of Southern California, followed. At this meeting a committee on permanent organization was formed, and Dr. Clark Whittier was elected president. Plans are made to organize, if possible, a C. L. S. C. in every pastoral charge, school district, mine, and Y. M. C. A. in the seven southern counties of California. We mean aggressive work on the borders of the great Pacific.

A LOCAL CIRCLE ASSEMBLY.

The first Local Circle Assembly of which we have heard was held on June 30th, at Lake Grove, Auburn, Me. Six different circles in the towns of Lewiston, Auburn, and New Gloucester were represented, and with their invited guests made a gathering of several hundred people. This was the first out-of-door C. L. S. C. Assembly ever held in Maine. The occasion was one of great interest. A program of delightful exercises was carried out. There was a grand banquet and a long list of witty and entertaining after-dinner speeches. Among the pleasant features of the occasion was the following kindly letter from Dr. Vincent to the Assembly:

NEW HAVEN, CONN., June 18th, 1884.

MY DEAR SIR AND BROTHER:—Through you I desire to salute the members of the C. L. S. C. to assemble at Lake Grove. Nothing but official engagements of an imperative character could keep me from the fellowship of the six circles on the 30th inst. I hail with joy all these movements which tend to develop the social life of our members, and to create within

the circle something of the class and society spirit which characterizes the college. An important factor of school life is the association of students and the sympathy growing out of similar aims and experience. The delight which accompanies the development and play of such sentiments is not limited to the early years of life, nor are the relief, the recreation and the inspiration which it furnishes alone needed by youthful students. Full grown men need and can appreciate the same; and it is the object of the C. L. S. C. to promote it by our class spirit, by our annual and class songs, by the mottoes, often repeated, by the sundry devices which tend to make the C. L. S. C. a union of hearts. Accept my hearty salutations. May I exhort you all to be diligent missionaries of the C. L. S. C. Idea? Enlist as many members as you can in the class of 1888; and where it is impracticable to enlist members as members of the C. L. S. C., present to them with strong argument, the scheme of the "Spare Minute Course," which will sooner or later result in larger work proposed by the older society. Praying that our Heavenly Father may be in the midst, that you may continue to study his word and works, and in all these you may never be discouraged, I remain your affectionate fellow-student,

J. H. VINCENT, Supt. Instr. C. L. S. C.

J. C. HASKELL, Pres. Auburn C. L. S. C.

It is hoped that a summer school will follow in the train of this first meeting.

LAKE D'FUNIAK, FLORIDA.

During the past year plans have been matured for holding an Assembly at Lake D'Funiak, Florida. The C. L. S. C. will, of course, be the great feature of the gathering. As the Assembly meets in February we may hope to report its work in the present volume of THE CHAUTAUQUAN.

MOUNTAIN LAKE PARK, MARYLAND.

Beautiful for situation in one of the many lovely glades of the Alleghenies, nearly 3,000 feet above the sea, in the very midst of grand and imposing mountain scenery, and where the freshness and crispness of the air itself gives inspiration, Mountain Lake Park, Garrett Co., Maryland, although but in the third year of its existence, owing to the facility with which it is reached from the Mississippi Valley and the Atlantic slope, and to its increasing celebrity as a delightful and healthful summer resort, already numbers about eighty cottages and four or five hotels or boarding houses, which in the height of the season are inadequate to accommodate the guests who desire to avail themselves of its many advantages. The Mountain Lake Park Assembly commenced its second annual meeting here on August 14th, under the most favorable auspices. The lecture course was an unusually brilliant one. The names of Revs. D. H. Muller, D.D., of Cleveland, Ohio, Washington Gladden, D.D., of Columbus, Ohio, Jesse Bowman Young, A.

M., Philadelphia, Penn., J. B. Van Meter, D.D., Baltimore, Md., Prof. Charles J. Little, Ph. D., State Librarian of Pa., and others are themselves a sufficient assurance of the very high character of the literary feast provided for the deeply interested and discriminating audiences who daily listened to them. The Chautauqua Sunday-school Normal Course was one of the marked features of interest during the Assembly, the instructors being Rev. J. T. Judd, Lewisburg, Pa., president of the Assembly, Prof. J. B. Young, Philadelphia, Rev. Wm. M. Frysinger, Baltimore, and Prof. W. A. Lindsay, Carlisle, Pa. After passing a written examination, diplomas of the C. T. U. were granted to Rev. L. E. Peters, Clarksburg, W. Va., Dr. Robert W. Armstrong and Miss Laura Rice, of Baltimore, Maryland. Thursday, August 28, was C. L. S. C. day. The members of the circle, the officers of the Assembly, and the president and directors of Mountain Lake Park Association assembled at 11 a. m., at a designated place in the grove. The marshal of the day, C. O'Brien Mettee, Esq., of Baltimore, formed the line of procession, which was headed by a number of little girls bearing flowers to strew the path of the graduate, Mrs. A. C. Rodgers, of Baltimore, who followed immediately with her escort of four maids of honor. The officers of the Assembly and of the Association, with the members of the circle, and other Chautauquans present, each wearing a sprig of golden rod as a badge, brought up the rear of the line. While marching from the Grove to the Auditorium the procession united in singing Chautauqua Hymn No. 1, "We gather here a pilgrim band," after which, while the members and invited guests took the seats reserved for them, Rev. Jesse B. Young, A. M., made the Commencement address, after which all joined in the responsive service appropriate to the second motto, "Let us keep our heavenly Father in the midst," and in the Chautauqua Hymn of Greeting. The president of the Mountain Lake Park Association, Rev. Dr. J. B. Van Meter, of Baltimore, made the salutatory address, Rev. C. W. Baldwin, of Cumberland, Md., offered a few words, and President Judd then made a brief but eloquent and suggestive address, concluding with the presentation of the Chautauqua diploma to the graduate, Mrs. A. C. Rodgers, of Baltimore. At a meeting of the circle on August 29, a unanimous vote of thanks was tendered to President Judd, "for the able and kindly manner in which he had presided over its sessions and in various ways furthered its interests." The secretary was instructed to furnish a copy of his report to THE CHAUTAUQUAN for publication. The closing meeting of the Assembly was held at night, followed by a general illumination, camp-fire, corn-roast, stump speeches, and a general hand-shake good-bye. Rev. J. T. Judd was unanimously reelected as president for the ensuing year, and Dr. Robert W. Armstrong, of Baltimore, was elected secretary, in place of Miss Jennie Jones, resigned. Between twenty and thirty new members were added to the circle.

WORDS FROM CHAUTAUQUA.

BY REV. J. H. VINCENT, D.D.,
Superintendent of Instruction.

The season is over. The crowds have gone. The classic groves are again quiet. The silent lake lies by a silent shore, reflecting the lovely verdure of trees and terraces, and the deep blue of overarching heavens. The Temple, busy scene for all these weeks, is solitary now as a deserted abbey. The huge amphitheater with its capacious concave, its chairless orchestra and sealed up organ, seems awful in its vast emptiness, and sacred with haunting memories of eloquence and song, and of

surging, enraptured, applauding multitudes. Palestine is deserted. Jerusalem is solitary. The waters of the Dead Sea have backed up until Jordan has far overflowed its banks. The fountains have ceased their play, the electric light no more vies with moon and stars, the walks are well-nigh forsaken, and again in the primeval forest one walks alone, and undisturbed meditates in the temple of nature. One spot is doubly sacred since the crowds have gone. It is the Hall of Philoso-

phy. In impressive majesty it crowns the hill. Its white columns present a fine contrast with the brown and gray trunks, and the now changing foliage of the trees in St. Paul's Grove. The vesper song has ceased. The voices of query and counsel, raillery, jest and melody, are no more heard. The earnest souls who hither came with love and zeal, with hope and desire, have passed forth into a busy world, with memories not soon to be forgotten, joys never to be wholly extinguished, and resolutions which reach out towards the higher, larger plane of human aspiration, to find their end and crown in God.

There is to me an ineffable charm about this dear old Hall. In it nature dwells and God reigns. In it many a burdened soul has found in earnest thoughtfulness, freedom and rest. Many an unsyllabled vow, without human sign to mark it, has here brought peace and strength out of the silent but all-encompassing heavens, to prepare human souls for human and divine service in far away homes, and in coming days of struggle and sorrow. The most sacred center of the whole Chautauqua world is the "Hall in the Grove." It is not far thence to heaven.

As I linger a few days in these silent and sacred sanctuaries after the multitudes have gone, to rest myself and prepare for severer duties out in the world, I think, of course, of the great and goodly company of readers and students in the C. L. S. C. over this and other lands, and I know you will receive a few words of advice that spring from the grasses and drop from the trees, and steal out of the silences as enthusiasm turns a listening ear to what the unembodied spirit of Chautauqua may say to the sons and daughters of Chautauqua everywhere.

1. First of all let me say that enthusiasm, enkindled by solemn services such as we have here enjoyed, needs to be incarnated and exercised in plain, straight-forward, everyday doing through the whole year. Songs and raptures, longings and covenants, must be transformed into heroisms of a plain and practical type in the unsentimental and homely fields to which stern duty may lead us. The Chautauqua fervor must become fidelity. The Hall of Philosophy must help shop,

kitchen, school-room and parlor. Emotion must go into motive and muscle. Songs in August must make sinews for October and May.

2. Our work must be more regular and steady. Spasmodic reading "to catch up" are not as useful as everyday readings with plenty of time to think over what one has read. System demands will-power. In resoluteness is discipline. We retain and appropriate more effectually what we read without a sense of hurry. A feeling of regret and of anxiety must hinder the best action of mind. Therefore let us get into the way of doing a little every day. Overcome the apparent or real difficulty in your way. Resolve and then work your resolve, until it is worked out into action. Make up your mind to this and keep it made up.

3. Don't wait for local circles to be organized. Be your own local circle till others become a part of you. Don't regulate your life by the plans, purposes, or whims of your neighbors. Be, and let your simple being stir up other people to be and to do.

4. Go after other people. Talk to them. Tell them what this C. L. S. C. movement means. Put "circulars" in their way. Send messages and ambassadors to them. Don't "bore" them exactly, but bear on them till they at least examine the claims of the C. L. S. C.

"Day is dying in the West," and it is time for closing words. Very soon autumn leaves will strew the ground, and very soon the glory of autumn will be hidden by the crystal splendors of winter. The blessed reunions of this summer will have passed into history, and our scattered fraternity be engaged in the conflicts of this weary and busy, but after all, glorious world. In the strife and the weariness and the work let us remember every inspiring service of the past, and gather strength also from our look of faith into the future—the future that is nearest, and the future that is very far off—a future in which we shall be the glad children of a good Father—that father a great King, and that King immortal, invisible, eternal, who has wonderful things for us which one day he will give to us when he gives to us himself.

CHAUTAUQUA, September, 1884.

QUESTIONS AND ANSWERS.

ONE HUNDRED QUESTIONS AND ANSWERS ON "BRIEF HISTORY OF GREECE" AND "PREPARATORY GREEK COURSE IN ENGLISH."

BY A. M. MARTIN,
General Secretary C. L. S. C.

I.—FIFTY QUESTIONS AND ANSWERS ON "BRIEF HISTORY OF GREECE."

1. Q. So far as we know where did the history of Europe begin? A. In Greece.

2. Q. Who first settled the country, and who first conquered the land? A. The Pelasgians, a simple agricultural people, were the first to settle the country. Next, the Hellenes, a warlike race, conquered the land.

3. Q. To what did the blending of the Pelasgians and the Hellenes give rise? A. To the Grecian language and civilization.

4. Q. What were two great "holding-points" for all the Greeks? A. The half-yearly meeting of the Amphyctyonic Council, and the national games or festivals.

5. Q. What are the subjects of four of the early legends in the history of Greece? A. The Argonautic Expedition in search of the Golden Fleece, the Twelve Labors of Hercules, the Siege of Troy, and the Hunt of the Caledonian Boar.

6. Q. What was one of the first clearly defined events of Grecian history? A. The Dorian migration. The Dorians descended from the mountains, moved south, conquered the Achæans in the Peloponnesus, and occupied the chief cities—Argos, Corinth, and Sparta.

7. Q. What two races came to be the leading ones in Greece, and what rival cities represented their opposing traits? A. The Dorians and the Ionians. Sparta represented the Dorians and Athens the Ionians.

8. Q. Who finally crystallized into a constitution all the peculiarities of the Spartan character? A. Lycurgus, a member of the royal family.

9. Q. What are some of the regulations Lycurgus prescribed in his aim to make the Spartans a race of soldiers? A. Trade and travel were prohibited. No money was allowed, except cumbersome iron coins. Most property was held in common. Boys were educated and cared for by the state.

10. Q. What conquest made Sparta dominant in the Pelopon-

nessus? A. The conquest of Messenia in two long, bloody wars.

11. Q. According to the legends, what did Cecrops, the first King of Athens, teach the people of Attica? A. Navigation, marriage, and the culture of the olive.

12. Q. After the death of Codrus, the last monarch, how was Athens governed? A. By archons, who first ruled for life, then for ten years, and finally for one year.

13. Q. What was the character of a code of laws prepared by Draco for the government of Athens? A. They were said to have been written in blood, every offence being punished with death.

14. Q. Who drew a new constitution, repealing the harsh edicts of Draco, and what was the effect upon Athens? A. Solon. Athens prospered under his wise management.

15. Q. What tyrants subsequently governed Athens? A. Pisistratus, and his sons, Hippias and Hipparchus.

16. Q. After the assassination of Hipparchus and the banishment of Hippias, what form of government was established in Athens by Cleisthenes as archon? A. A democracy.

17. Q. What brought about the Persian wars near the beginning of the fifth century? A. The attempt of Cyrus, the King of Persia, to punish Athens for assisting the Ionian cities of Asia Minor in throwing off the Persian yoke.

18. Q. What was the result of the first expedition against Greece, sent out under Mardonius, the son-in-law of Darius? A. The land troops were defeated in Thrace, and the fleet was shattered while rounding Mount Athos.

19. Q. In what famous battle were the Persians defeated on a second expedition against Greece? A. The battle of Marathon, the victorious forces being commanded by Miltiades.

20. Q. After the death of Miltiades what two generals associated with him at Marathon came to be the leading men in Athens? A. Themistocles and Aristides.

21. Q. Under whom was the third invasion of Greece by the Persians attempted? A. Under Xerxes, the son and successor of Darius, with over a million soldiers.

22. Q. At what place were the Persian hosts held in check by a small band of Greeks under Leonidas, a Spartan? A. At the pass of Thermopylae.

23. Q. On the third day, a traitor having pointed out a mountain path by which the Persians gained the rear of the Greeks, what was the fate of Leonidas? A. He, with three hundred Spartans and seven hundred Thespians, perished, fighting to the last.

24. Q. What leading city of Greece did the army of Xerxes burn? A. Athens.

25. Q. In what naval contest were the Persians soon after totally defeated? A. The battle of Salamis.

26. Q. On the same day of the battle of Salamis what contest occurred at the island of Sicily? A. The battle of Himera, in which the Carthaginian forces under Hamilcar were utterly routed by Gelo, the tyrant of Syracuse.

27. Q. In the following year what land and what naval battles gave the final death blow to the Persian rule in Europe? A. Plataea and Mycale.

28. Q. What league was formed to keep the Persians out of the Aegean? A. A league called the Confederation of Delos, the different states annually contributing to Athens a certain number of ships, or a fixed sum of money for the support of the navy.

29. Q. After the banishment of Themistocles and the death of Aristides, who were the leading men at Athens? A. Pericles and Cimon.

30. Q. To all students of Grecian literature, who must always appear as the central figure of Grecian history? A. Pericles.

31. Q. What is the period during which Pericles ruled Athens called? A. The Age of Pericles.

32. Q. During the latter part of the life of Pericles what war broke out in Greece, which lasted twenty-seven years? A.

The Peloponnesian war in which nearly all the states of Greece took part, Athens and Sparta being on opposite sides.

33. Q. What was the plan for the conduct of the war on either side? A. The Spartan plan was to invade and desolate Attica, while that of Athens was to ravage the coast of the Peloponnesus with its fleet.

34. Q. While the citizens of Attica were seeking protection within the walls of Athens, what leader died during the pestilence that followed? A. Pericles.

35. Q. Who was chief among the demagogues that now arose in Athens? A. Cleon, a cruel, arrogant boaster, who gained power by flattering the populace.

36. Q. What was the fate of Plataea during this war? A. It was besieged by the Spartans, and when those defending the city surrendered every man was put to death and the city razed to the ground.

37. Q. After peace had been established, by the influence of what demagogue was the bloody contest renewed? A. By the influence of Alcibiades, a young nobleman, the nephew of Pericles and pupil of Socrates.

38. Q. What naval expedition was fitted out at the instance of Alcibiades, and with what result? A. An expedition against Sicily. The Athenian ships were defeated, and the troops attempting to flee by land were overtaken and forced to surrender.

39. Q. Before the final defeat of the expedition, to what rival city had Alcibiades given his support upon being summoned to Athens to answer charges that had been brought against him? A. To Sparta.

40. Q. How was the Peloponnesian war ended? A. By the surrender of Athens and her fleet, and the destruction of her long walls.

41. Q. By whom was Athens now for a time ruled? A. An oligarchy of thirty persons. After they had ruled only eight months the Athenian exiles returned in arms, overthrew the tyrants, and re-established a democratic government.

42. Q. What is meant by the "Retreat of the Ten Thousand" in Grecian history? A. The march of ten thousand Greeks from the heart of the Persian empire through a hostile country back to Greece.

43. Q. What battle, under what general resulted in the overthrow of Spartan rule, and made Thebes the chief city in Greece? A. The battle of Leuctra, the Theban army being led by Epaminondas.

44. Q. At what place did Epaminondas fight his last battle and die in the moment of victory? A. At Mantinea.

45. Q. When Philip came to the throne of Macedon, to what end did he bend every energy of his mind? A. To becoming the head of all Greece.

46. Q. What wars grew out of Philip's scheme? A. The Sacred wars.

47. Q. At what battle did the Macedonian phalanx annihilate the armies of Thebes and Athens? A. The battle of Chaeronea.

48. Q. What befell Philip as he was preparing to lead an army into Persia? A. He was assassinated at his daughter's marriage feast.

49. Q. Who succeeded Philip, and by his conquests established a vast empire in Asia? A. His son, Alexander.

50. Q. Soon after the death of Alexander, among whom was his empire divided? A. Among his principal generals.

II.—FIFTY QUESTIONS AND ANSWERS ON "PREPARATORY GREEK COURSE IN ENGLISH," FROM COMMENCEMENT OF BOOK TO PAGE 87.

51. Q. What is the specific object of the "Preparatory Greek Course in English?" A. To put into the hands of readers the means of accomplishing, so far as this can be done in English, the same course of study in Greek as that prescribed for those who are preparing to enter college.

52. Q. Of what three most famous peoples in the world are the Greeks one? A. The Jews, the Greeks, and the Romans.
53. Q. By what name did the Greeks speak of themselves, and what was their name for the land in which they lived. A. Hellenes, and Hellas was their name for the land in which they lived.
54. Q. When trustworthy history begins, what were the three chief divisions of the Hellenic stock? A. The Dorians, the Æolians, and the Ionians.
55. Q. For what two things is the literature of Greece equally remarkable? A. For its matter and for its form.
56. Q. What is there remarkable about the form of Greek literature? A. There never has been elsewhere in the world so much written approaching so nearly to ideal perfection in form as among the Greeks.
57. Q. In what department of literature do we without reserve have to acknowledge the supremacy of the Greeks? A. In eloquence, and in the literature of rhetoric, of taste, and of criticism.
58. Q. What is the golden age of Greek literature, Greek art, and Greek arms? A. The age of Pericles.
59. Q. What do we know of the pronunciation of their language by the ancient Greeks? A. Nobody knows with certainty exactly how the ancient Greeks pronounced their language.
60. Q. What has been the general rule for scholars in the pronunciation of Greek? A. To pronounce somewhat according to the analogy of their own vernacular.
61. Q. What attempt, only partially successful, has recently been made to introduce uniformity in the pronunciation of Greek? A. To secure the common adoption of the pronunciation prevalent in Greece at the present day.
62. Q. What four Greek grammars are mentioned as perhaps the best? A. Hadley's, Goodwin's, Crosby's and Sophocles'.
63. Q. To what source of Greek learning do all these manuals acknowledge their indebtedness? A. To German sources of Greek learning.
64. Q. Who is the most recent of the great German authorities in Greek grammar? A. Curtius.
65. Q. In what dialect are the books chiefly written from which the selections are taken in making up Greek readers? A. The Attic dialect.
66. Q. How many chief dialects were there of the Greek language, and how were they created? A. There were three—the Ionic, the Doric and the Attic—created in part by differences of age, and in part by difference of country.
67. Q. In whose writings is the Ionic dialect exemplified, and how is it characterized? A. In the writings of Homer and Herodotus, and is characterized by fluent sweetness to the ear.
68. Q. In what dialect were the most of the greatest works in Greek literature composed? A. The Attic.
69. Q. What are some of the distinguishing features of the Attic dialect? A. It is the neatest, most cultivated and most elegant of all the varieties of Greek speech.
70. Q. To whom are the fables commonly attributed that are generally found in Greek readers? A. To Æsop.
71. Q. Who made the collection of fables that go under Æsop's name? A. They are mainly the collection of a monk of the fourteenth century.
72. Q. What are the names of some of the eminent persons about whom anecdotes are usually related in the collections found in Greek readers? A. Diogenes, Plato, Zeno, Solon, Alexander, and Philip of Macedon.
73. Q. What Greek writer of the second century after Christ is more or less quoted from in the ordinary Greek reader? A. Lucian.
74. Q. What famous dialogues did he write? A. Dialogues of the dead.
75. Q. Of what have these dialogues been the original? A. Of several justly admired imitations.
76. Q. In what direction did Lucian exercise his wit? A. In ridiculing paganism.
77. Q. What are some of the kinds of other matter that goes to make up the Greek reader? A. Bits of natural history and fragments of mythology.
78. Q. From what work of Xenophon do Greek readers often embrace extracts? A. His "Memorabilia of Socrates."
79. Q. What was the design of this work? A. To vindicate the memory of Socrates from the charges of impiety and of corrupting influence exerted on the Athenian youth, under which he had suffered the penalty of death.
80. Q. What is the plan of the work largely? A. To relate what Socrates did actually teach.
81. Q. What work by a Christian writer did pagan Socrates in large part anticipate? A. "Natural Theology," by Paley.
82. Q. What was the chief characteristic trait of the method of Socrates in teaching? A. His art in asking questions.
83. Q. What is the book usually adopted in sequel to the reader for giving students their Greek preparation to enter college? A. Xenophon's "Anabasis."
84. Q. In what two respects is this work highly interesting? A. First, as a specimen of literary art, and second, as strikingly illustrative of the Greek spirit and character.
85. Q. What is the meaning of the word "Anabasis?" A. "A march upward," that is, from the sea.
86. Q. Of what is the book an account? A. Of an expedition by Cyrus the Younger into Central Asia, and the retreat of the Greek part of his army.
87. Q. Who accompanied Cyrus on this expedition? A. An oriental army of about 100,000, and a body of Greeks numbering about 13,000.
88. Q. What was the object of this invasion on the part of Cyrus? A. To obtain possession of the Persian throne, occupied by his brother, Artaxerxes.
89. Q. In what does the main interest of the Anabasis as a narrative lie? A. Rather in the retreat than in the advance.
90. Q. From what does the whole matter of the famous advance and retreat of the ten thousand derive grave secondary importance? A. From the fact that it resulted in revealing to Greece the essential weakness and vulnerability of the imposing Persian empire.
91. Q. When was Xenophon, the author, born, and with whom was he not far from contemporary? A. He was born about 431 B. C., being thus not far from contemporary with the Hebrew prophet Malachi.
92. Q. What did Xenophon's presence of mind and practical wisdom give him in the retreat? A. A kind of leadership which he maintained until a prosperous issue was reached on the shores of Greece.
93. Q. Among the other chief works of Xenophon what one is prominent? A. The "Cyropædia."
94. Q. What was the starting point of the expedition related in the Anabasis? A. Sardis.
95. Q. During the march what city did the army plunder where four hundred years later the Apostle Paul was born? A. Tarsus.
96. Q. When they reached the river Euphrates what did Cyrus openly tell the Greek captains as to the object of the expedition? A. That he was marching to Babylon against the great king Artaxerxes.
97. Q. What was the result of this disclosure when made to the men? A. They felt, or feigned, much displeasure, but by lavish promises the majority were prevailed upon to adhere to Cyrus.
98. Q. What Persian commander among the forces proved a traitor and met with a tragic death? A. Orentes.
99. Q. Where did the armies of Cyrus and Artaxerxes finally encounter each other? A. At Cunaxa.
100. Q. In what way did Cyrus meet with his death? A. While engaged in a personal contest with Artaxerxes Cyrus was struck with a javelin under the eye and slain.

OUTLINE OF REQUIRED READINGS.

OCTOBER, 1884.

First Week (ending October 8).—1. Barnes' "Brief History of Greece," from page 1 to "The Civilization," page 46.

2. Preparatory Greek Course in English, from chapter i. to chapter v., page 21.

3. "Why we Speak English," in THE CHAUTAUQUAN.

4. Sunday Readings for October 5, in THE CHAUTAUQUAN.

Second Week (ending October 15).—1. Barnes' "Brief History of Greece," from page 46 to "Readings in Greek History," page 93.

2. "Preparatory Greek Course in English," from chapter v. page 21, to "Lucian," page 43.

3. Readings in Chemistry, in THE CHAUTAUQUAN.

4. "How to Make Home Beautiful," in *Our Alma Mater*.

5. Sunday Readings for October 12, in THE CHAUTAUQUAN.

Third Week (ending October 23).—1. Barnes' "Brief His-

tory of Greece," from page 93 to "Life of Socrates," page 143.

2. "Preparatory Greek Course in English, from "Lucian," page 43, to "First Book," page 65.

3. "Studies in Kitchen Science and Art," in THE CHAUTAUQUAN.

4. "Glimpses of Ancient Greek Life," in THE CHAUTAUQUAN.

5. Sunday Readings for October 19, in THE CHAUTAUQUAN.

Fourth Week (ending October 31).—1. Barnes' Brief History of Greece," from "Life of Socrates," page 143, to end of volume.

2. "Preparatory Greek Course in English," from "First Book," page 65, to "Second Book," page 87.

3. The "Temperance Teachings of Science," in THE CHAUTAUQUAN.

4. "Greek Mythology," in THE CHAUTAUQUAN.

5. Sunday Readings for October 26, in THE CHAUTAUQUAN.

WEEKLY PROGRAM FOR LOCAL CIRCLE WORK.

It often happens that local circles are deterred from much of the good work which they might do because they have no systematic plans. Lack of time, or, perhaps, sometimes, a not quite clear understanding of how to arrange weekly programs prevents leaders from laying out the work in attractive and practical ways. To supply this need we introduce into THE CHAUTAUQUAN weekly programs of literary exercises for local circle use. These programs are simply suggestive. No one is expected to follow them *in toto*, or even to follow them at all unless they shall choose to do so. They can be re-arranged, added to, or selected from, to suit the needs of a particular circle. If in any case helpful hints shall be gleaned their object will be attained. The exercises presented will be arranged to correspond to the reading of the week to which the program belongs. When a Memorial day occurs the weekly program will be dropped and a typical program for memorial exercises inserted. Plans for monthly public meetings will also be inserted from time to time.

PROGRAM FOR THE FIRST WEEK OF OCTOBER.

Roll-call.—Responded to by quotations from Greek authors.

1. A talk on the geography of Greece.

2. Fifteen minutes quiz on "Why we Speak English."

Music.

3. Written *résumé* of the events of the past month.

4. Essay The Climate of Greece.

Music.

5. Map exercise Tracing of the Aryan Migration.

6. Question drawer.

SECOND WEEK OF OCTOBER.

Music.

1. Written answers to questions handed in at previous meeting.

2. Select Reading.

3. Essay Greek Civilization.
Music.

4. Thirty minutes in Chemistry—performing of the experiments described in THE CHAUTAUQUAN.

5. Pronouncing match on Greek names.

THIRD WEEK IN OCTOBER.

Roll-call.—Responded to by quotations.

1. Brief outlines of the week's readings.

2. Essay The Athens of To-day.
Music.

3. A Talk on the Potato.

4. Essay The Battlefields of the Persian War.
Music.

5. An Ancient Greek House—explained by diagrams drawn from the explanations given in readings, and illustrated by the pictures and relics which are accessible.

FOURTH WEEK IN OCTOBER.

Music.

1. Essay Modern Greece and the Modern Greeks.
2. General review of "Questions and Answers on the Required Readings."

[For this review a large society may be divided into two divisions, exactly as for an old fashioned spelling school, and the questions given out to the sides as words are given to spell. "Missing" puts one out, and the person who stands up until the questions are exhausted wins the match. This often proves both a profitable and amusing exercise.]

Music.

3. Essay The Battle Fields of the Persian War.
Music.

4. Debate.—Resolved that the use of alcohol as a medicine is not justifiable.

THE C. L. S. C. CLASSES.

CLASS OF 1885.

BY C. M. NICHOLS.

"Press on, reaching after those things which are before."

"THE OUTLOOK."—The Class of '84 printed a handsome and ably conducted quarterly sheet, called *The Outlook*, but the class of '85 decided, after full consideration, to accept the offer of THE CHAUTAUQUAN, of the use of a page or more each month in the official organ of the C. L. S. C. It was believed that through this department of THE CHAUTAUQUAN all the members of the Class could be promptly reached; that all the purposes of the Class could be promoted efficiently in the department, and that, through it, the members of the entire fraternity—the alumni as well as the members of '86, '87 and '88, could be advised each month of what the Invincibles were about. Accordingly, with this number we begin a class page for the '85s.

THE INVINCIBLES AT CHAUTAUQUA IN 1884.—The Class of 1885 "come out strong"—as the late Mr. Mark Tapley would say—at Framingham, this year, and there was also a good representation of its members at Chautauqua. A delightfully fraternal feeling was manifested on the several occasions when class meetings were held. President Underwood improved on acquaintance and showed himself to be a lively and pleasant gentleman, as well as an industrious and efficient officer—to such an extent and to such universal acceptance and approval that he was reelected to his honorable position by the unanimous voice of the members present. Mrs. Philomena Downs, of Burlington, Iowa, being in ill-health and not able to be present this year, sent in her resignation as vice president and insisted on its acceptance, and Mr. C. M. Nichols was elected in her place. Miss Carrie Hart, of Aurora, Indiana, who had proved especially serviceable as treasurer, was reelected, and Miss N. M. Schenck, of Osage City, Kansas, feeling that her remoteness from the Chautauqua center was a feature of inconvenience, desired a successor appointed, and Miss M. M. Canfield, of the Third Auditor's office, Washington, D. C., was chosen secretary in her place. These persons compose the executive committee.

The Commencement orator for 1885 will be selected by Chancellor Vincent.

By unanimous vote of the class, Mrs. Frank Beard, of Syracuse, New York, was selected to write the class song for 1885, and Prof. W. F. Sherwin, of the Boston Conservatory of Music, was asked to set it to music.

Chancellor John H. Vincent, D. D., was asked to preach the baccalaureate sermon for 1885, and he has kindly consented to do so.

It has been decided by the class to ask each member to send twenty-five cents to the treasurer, Miss Carrie Hart, Aurora, Ind., as a contribution to the class fund for 1885. It is important that these contributions should be sent early, and that they should constitute, in the aggregate, a good round sum.

The Class of '85 is indebted to the Class of '84 for a pleasant excursion by steamer, from Chautauqua to Lakewood.

Badges for the Class of 1885 may be had of the president, Mr. J. B. Underwood, or of the secretary.

Mr. Henry Hart, of Atlanta, Georgia, has been selected to prepare the stationery for the Class of '85, and those wishing note paper and envelopes can order them of him. The design

is a heliotrope, with the word "Invincible" over the figures "85," with the motto of the class. The envelopes are to match and the price of a box of the note sheets and envelopes will be only fifty cents. It is thought they will be very neat and tasteful.

"FALL IN!"—Those members of the Class of 1884—the "Irrepressibles,"—who "failed to connect" at the Golden Gate, on Commencement day, are cordially invited ("by these presents") to fall into the ranks of the "Invincibles" and march with them to victory.

CLASS OF 1887—THE PANSIES.

This column is devoted to the Class of '87. Items of interest, facts and incidents will appear each month, and we hope occasionally to have something from "Pansy."

The first meeting of the Class of '87 held at Chautauqua this year was called at the request of members present, in the Hall of Philosophy, Rev. Frank Russell presiding. It was decided there that the officers elected last year were chosen for four years, and they were requested to continue in the service of the class. At a subsequent meeting in the Temple one member said that he had good authority for stating that any member of the class who was behind and would make up the reading for the year could do so and hand in the memoranda this year or any time during the four years. The numbers of the class could still be increased by looking up former members of other classes who had read one year or more and dropped out. All were urged to become helpers in this respect. It was also advised in the interest of our *alma mater* that we should use our efforts to increase the Class of '88, which is now being formed, and bring the new members into local circles.

The members of the class enjoyed a social hour with Mrs. Alden in the grove at Chautauqua the past summer. Many written questions were presented to her which were promptly and wisely answered. To the question, "Will Mrs. Alden write a book, dedicated to the Pansy Class?" she replied, "Yes, if every one present will write me a four page letter of incident relating to C. L. S. C. work." All most heartily voted to do this. These letters must be in her hand (Mrs. G. R. Alden, Carbondale, Pa.,) before February 1st, 1885. Of course Mrs. Alden will be happy to receive letters of incident in the work from members of the class that were not present. It goes without the saying that every member is delighted with the promised book, and who of our 18,000 will not peruse with delight the gifted author's words of wisdom when they shall appear.

Our class has over 18,000 names on the two great books at the office in Plainfield. It is a great privilege as well as an honor to be one of such an army of all ages and conditions and in all lands, who are vying with each other to improve the passing moments in training body and soul for highest interests for this life and the life to come.

Is it too much to expect that a round ten thousand of the Pansy Class shall graduate, and that one-half of them shall receive their diplomas at Chautauqua? Think of every seat in our vast Amphitheater being filled with the graduating class in August, 1887!

EDITOR'S OUTLOOK.

THE CHAUTAUQUA PLAN.

The eleventh Assembly has wrought its work, and it is safe to say no Assembly ever made more converts to the Chautauqua Plan. Among the number, too, were many of the best thinkers and ablest educators in the country. Many left Chautauqua this summer convinced of the possibilities in the work, and resolved to spread its influence. One of these, the Rev. Dr. A. A. Livermore, president of the Unitarian Theological School at Meadville, Pa., a man widely known as a ripe scholar, has published an article analyzing the Chautauqua plan. This article explains most clearly the strong features of the work. After describing the enthusiastic Commencement the writer says of the C. L. S. C.: "College education, as it has been hitherto carried on, has been largely a forced concern; students have been sent to school, rather than gone on their free and spontaneous will. The pupils of Chautauqua are voluntary agents, and engage in their work with a will. It is the difference between task work and love work. Almost all schools and colleges are handicapped by the compulsion necessary to bring their pupils up to the mark. But here all goes like clock work. There is a vim and abandon which argue the best results. Not knowledge, but the love of knowledge, is the best of accomplishments, and that is breathed into the Chautauquan graduates."

"The religious element is made a leading principle in the Chautauqua education, and it is the true one. Intellect for intellect, taste for taste, study for study, lacks the genuine inspiration, but put on the annex of religious faith in God, Christ and immortality, and you have got an effective leverage to raise the whole nature of man. The Chautauqua Idea is not so much to make specialists; as for example, engineers, editors, ministers, doctors, lawyers, but well instructed men and women. Human nature is a diamond in the rough, and it is worth polishing and setting for its own sake. God having bestowed such a magnificent treasure on man, he is guilty who does not put it to its intended purpose, and return it to its author improved and developed to its best extent."

"Another fine idea of the Chautauqua University is to *educate people at their homes*. Massing students together in great monastic institutions is dangerous business. Humanity heats and moulds and corrupts when put into crowded institutions, be they prisons or colleges. Some of the worst disorders perpetrated in society take place in schools and universities where young people are herded together in great numbers with the restraints of home and society largely thrown off. This scheme is to carry on the work at the fireside, on the farm, at the shop, by the work bench. Carry education to the people, instead of carrying the people to education. And still further it is the idea not to take people from their usual occupations after they are educated, not to take farmers, mechanics, housewives from their present callings and put them in the learned professions, but to leave them still where they are, and start them on a course of mental and moral improvement which they can conduct all their lifetime at their homes, and while still engaged in their several industries. This is a capital merit of the system, and deserves especial commendation."

"So planned and so engineered, Chautauqua is the university of the *common people*, of the great middle class that constitute the strength and glory of every country, and especially of ours. Its numbers are prodigious, its extent is world wide. It sets a splendid example for all nations. It strikes the keynote for the education eventually of the whole human race. In our land it is destined to do more for the perpetuation of our free institu-

tions than many another time-honored school or college that limits its benefits to some privileged class, sex, color or section. Chautauqua blows a trumpet to every quarter of the compass, and says to all, 'Come ye and buy wine and milk without money and without price.'"

THE PRESIDENTIAL ELECTION.

Is there not ample room for non-partisan comment on partisan struggles? We are in the midst of a political conflict which inevitably takes up a large part of the general attention; surely there must be some suggestions which a non-partisan can profitably make. For example, look at the fact, new in important points, that personal scandal affecting candidates occupies a conspicuous place in the contest. We have been in the habit of reasoning that such an element must be demoralizing. Is it such in the present instance? We think not. We further think that some very good results may follow such a political campaign. The prominence given to questions of personal purity, in public life and in private life, is itself a good sign. It means that the people are keenly alive to moral issues, that these issues cannot be evaded, that the public demand for purity has risen without the special notice of the quick-witted managers of politics. Nor are the discussions having any unfavorable effect on sound morals. The people insist upon the moral element, and by so doing prove that they are sounder, truer, more religiously patriotic than they were supposed to be. We see also the better uses of the press in more favorable lights. When a scandal is not merely mud, but involves plain matters of fact in the life of a candidate, the press is put on its good behavior to tell the story with decorum, and prove it with good evidence. We never have seen a cleaner campaign, though we never saw one with such conspicuous challenging of private character. A wise man said long ago that the American people are always grave in grave circumstances. The present occasion proves the rule. The solemnity of the challenge of character has given an air of sobriety to the campaign which is as satisfactory as it was unexpected.

Another thing which seems to us quite in our way to say is that the political contest has an uncommonly large humanitarian element in the center of the field. We probably have readers who believe that the interests of the American workmen are not specially concerned in the result. It is not that question of fact which we now raise, but the fact of the *solitude* for the workmen which is conspicuous. We are witnessing, at this point, not so much a discussion about the tariff—for so far there has not been much of that—as a discussion over the permanent welfare of a large and growing section of our population. This discussion is not carried on by them so much as on behalf of them. Granted that a great party sees in their welfare an opportunity; what is it that makes the opportunity? It is surely not any incidents of the last Congress, or any opinions of candidates. These would be insufficient to create the discussion in its serious form. Is it not true that the philanthropy which freed the slave is thinking and feeling for the men in mills, and their wives and little ones? It would be easy to show that the politicians would have passed this matter by if they could. But we have become a manufacturing country. The laborer has become a great fact. He is a citizen, a social element, a man with a soul, and the head of a family. The social instinct in us took alarm some years ago. Outside of parties it has worked out into humanitarian feeling, and is ripening into purpose. The workman is likely for some de-

eades to fashion for us the spirit of our politics and the ends sought by our statesmanship. No matter how much or little it may influence the results of this struggle for the control of the government, the question of the workman's well-being has come among us to stay. It touches our life at all points. It challenges our institutions. It says to us: "Solve me or I will dissolve you." Are we to have a distinctly depressed class doing our work? Is the "white slave" to live, suffer and die under our feet? There are persons who say, "it is inevitable. Older societies have sifted down to the bottom these forlorn and hopeless elements by force of a natural necessity, by a law of human society." No good and strenuous American believes such a doctrine. The country we live in exists, in our thought, to make life fairer, sweeter, more equally gracious for all the members of the national household. Our ideal is challenged by the specter of a degraded mass of laborers. We can not see this ghost of the old world without a shiver of apprehension. It may be that tariff questions do not touch the main question; that is for others to consider. What we note is that the whole of this labor question, with its complicated relations to all other questions, looms large on the horizon.

A third suggestion is that the only practicable mode of dealing successfully with issues which concern morals, philanthropy and sobriety, is to get them a place in the one general contest which is waged for the control of the government. Two parties, one contest—that is the system of the Republic. All others than the two parties are participants in the one battle, and on one side or the other. A man in society has to accept the sun and rain, the social order, the general constitutional order. His third, fourth, fifth parties are related by the usages of the country to the real contest between the two parties. He must and really does choose which of the two he prefers for the victor. He might as well reject the showers of summer and say he will have none of them as to say he will have neither party. He must have one or the other; he will have one or the other; he will contribute to the victory of one or the other. It is possibly hard to choose; but when it is easy to do so, and one really wishes to defeat his own party, it is best to deal it a blow in front with both fists. Providence has arranged a system of mathematics which counts the men in the Cave of Adullam on one side or the other in the engagement of the battle-field. It is a good thing to put 200,000 temperance men in line in a state; but a little column of 5,000 or 20,000 of the same army demonstrating by itself really weakens the cause, because it is so small a part of the army. Workingmen's parties are no better. They are made up of men whose interests are in the hands of the great parties, one or the other of which must take the administration of affairs. The rule is that this truth of social mathematics grows clear to most men as the campaign proceeds; and in the end the great body of voters vote directly for the side they prefer. The stubborn fact is that only one man can be president at a time, and that the people must choose one of two men for the office. That is the law of American politics which no one of us can change. There is not even any relief from it afforded by dispersing the electoral votes among several men and leaving the House of Representatives to choose. That body is in existence with a distinct political complexion—to give the election to it is to choose one of the two candidates. That is not a chance fact of to-day; it is a rule of our political system. The political preference of the House of Representatives is always known when the presidential vote is cast. We are simply shut up, all of us, to promoting, directly or indirectly, the election of one of two men to the office of President of the United States.

THE SECRET OF THE POLE.

The rescue of the Greely party of Arctic explorers (a few days too late) has given the public two extraordinary sensations. The first exciting incidents were those of the rescue of

a party of men who had gone a few miles nearer to the Pole. We were allowed two weeks of satisfaction and rejoicing over the rescue and the scientific gains of the Greely expedition. Then came a sickening revelation of cannibalism among the starved and dying explorers. The sensational press never seemed so hateful as it did when it went prying into the horrors of the last month of that struggle for life. The cap-sheaf was put on indecency by a pictorial paper which gave a picture of one of the dead men, and printed under it that, after he was dead his comrades ate his flesh. The shamelessness of such journalism can not be rebuked; civilized language has no adequate terms. It is, however, no longer possible to deny that cannibalism is one of the remote possibilities of Arctic exploration. The fact may or may not temporarily arrest the efforts to uncover the secrets of the frozen North. We do not perceive a sufficient reason in the fact. We know that horrors hang around all histories of such discovery—this among them. But this is only a more disgusting fact. We know that the circum-polar battles between man and nature cost human life, rich and costly life, vast sufferings and cruel disappointments. It would be a strange thing if the full exposure of a revolting fact which is not new to the initiated few, should raise a murmur among the many now for the first time enlightened—a murmur so strong as to restrain governments from further explorations. We doubt if public opinion can in that way get a leverage under the scientific enthusiasm and overthrow it.

The main question recurs: What is the use of Arctic exploration? In general terms, it may be said that there are few, if any, unsolved problems of science on which Northern discovery *might not* shed light, and it may be said with equal truth that there is apparently nothing to be found out at the Pole, but the location of frozen hills and frozen seas among which life is impossible. There are chances that hints towards the solution of many problems may be gained in that world of frost; there is no certainty, not even any high probability that we shall be any wiser when we have beaten the Ice King and successfully traversed his dominions. Our readers know that the original impulse to these dangerous voyages was the hope of finding a northwest passage to India. When hope vanished new thoughts took the place of the old notion of going to India by the North Atlantic. Questions of ocean currents, of northern forms of vegetable and animal life, of the aurora borealis, of the phenomena of the Ice Age of the earth, of divers other eagerly studied questions of the world and man have arisen to stimulate discovery. The scientific man kept on in the lines which the trader had given over in despair. Besides, our blood was up. To be beaten by frost is not to be consented to by courageous humanity. And so the struggle has gone on. Fruitlessly? No, a considerable amount of precious knowledge has been gained: Each ten years adds some stretches of land and sea to our maps. The total result is probably richly worth the life and treasure expended. If in a battle a cause can claim ten thousand lives, who may say that in the pursuit of knowledge a few hundred shall be grudged? Besides, the world needs a moral gymnasium—a field in which courage, endurance, heroism, may be trained. The North is a better gymnasium than the field of war. It has fewer horrors and a more thorough discipline. Examples of manliness, devotion, self-denial abound in these stories of Arctic discovery. The examples tell on society at large much more effectively than military exploits. Every nation is interested in every heroic incident of the frozen seas. The attempt to call a halt in these enterprises will probably fail; and perhaps after all we should wish them to fail. Every life is well spent whose loss tells on general character, and we have no chapters of secular life that are richer in inspiration than those of Polar enterprise. Lives are lost; but our Lord's rule is good always that lost lives may be better lost than saved. The North may yet yield up precious secrets; it is safe to prophesy that if it has any under its winding sheet of ice man will discover it.

EDITOR'S NOTE-BOOK.

The Required Reading in THE CHAUTAUQUAN for the month of October ends on page 20, with the article on "Temperance Teachings of Science."

Mr. Henry Bergh, who has done a good work for horses in New York, and tried to do a good deal of work not absolutely good for other animals (cats for instance), has one quality of a successful reformer; he can use strong language. He denounces M. Pasteur as "A Jenner in France who now crawls to the earth's surface and begins the fiend-like and disgusting work of polluting the bodies and flesh of the lower animals." Mr. Bergh does not believe in inoculation for small-pox. It is a pity he does not confine his benevolence to horses and their sorrows, a subject which he understands.

Constant gains characterize the uses of electricity. Recently a message was sent from Australia to England in *twenty-three minutes*, over 13,318 miles of wire. French experiments in the use of electricity as a motor are making rapid progress. Telephone messages have been sent 1,200 miles, from Cincinnati to Baltimore, and we are not certain that this is the best record. Bulwer's "Coming Race" did everything by just touching buttons and setting automata at work. Perhaps that race is really "coming" after all.

What is in a name? The cholera is no worse, nor any more curable, by calling its cause a *microbe* (literally minute life, meaning microscopic insect). It does help us, however, to emphasize old truth. The diseased are usually victims, Dr. Koch says, of the microbes. If the digestive organs are impaired, the microbe attacks them with more success. Still, we are thus far not very much wiser for the terms *microbe* and *bacillus*. Meanwhile, Dr. Koch's first practical rule, that "dry heat is fatal to the microbe," is contradicted by the well-known fact that cholera in Asia is very much at home in the driest heat known on the globe.

The papers report that a colored man having married a white woman in Indiana has been tried for the crime and sentenced to five years in the penitentiary. We can not discover any use in such proceedings. As we have remarked once before, the mixture of races is not brought about by legitimate relations of the sexes, but by illegitimate. Indiana punishes the wrong people. For one mulatto born in marriage there are a thousand born out of wedlock. Besides, it has not been proved that the moral quality of a crime attaches to marriage by persons of different races. It is highly speculative morals, at all events.

The New York financial troubles of May have, as we anticipated, led to no general disaster. In New York the business community is well over the panic, stocks have recovered astonishingly, and general trade is active and good. Credit lines are closer than they were; but this is a good result. A large harvest gives the people assurance of cheap food, and stimulates enterprise. The shock in May has proved a blessing. We need to be reminded often that honesty, diligence and prudence are necessary to business success, individually and collectively.

Do not play with it; in the language of the boys, "it's loaded." We refer to the theory that impure private life is something relatively unimportant in public life. Vote as you judge proper; but don't corrupt public morals by public apologies for lechery in any form; it is dangerous business.

A respectably-sized body of unrespectable Americans have recently emigrated to Canada—made up of defaulting bank officers and other trust-breakers. There is a defect which ought to be remedied in the extradition laws. Canada does not wish to be colonized by this class of thieves, and we prefer to house and feed the rascals in appropriate residences at home. It is, in fact, a scandal to civilization that this class of thieves can escape punishment by crossing the suspension bridge.

It has settled into custom for the President of the United States to take a long vacation in the summer. We owe the custom, a wholesome one, to General Grant. It was criticised severely when he as President began to travel about in the summer. His successors have improved the practice by roving more widely and extending their acquaintance among their fellow-citizens. President Arthur has traveled a good deal in an unostentatious way this summer, and we have not seen a word of criticism. It is good for the President's health, it extends his knowledge of the country and the people, and it gives his fellow-citizens an opportunity to see and know him.

The cholera in Europe drove Americans home this year in midsummer, and gave us an unusually large contingent of the English tourist, who, shut off from the Alps, has been trying our Rockies and the Yosemite. A new feature of our own summer travel is a considerable stream of pleasuring flowing toward Alaska. Perhaps when the seals are killed off Alaska may pay as a summer resort.

One of the new blossoms of the "Chautauqua Idea" is a summer school maintained by the "South End" churches of Boston. Our correspondent, the Rev. E. E. Hale, is one of the active managers. Its session this year lasted six weeks, and was devoted to popular instruction in kindergarten and housekeeping subjects. The aim is to help the poor to knowledge in practical matters.

The world's stock of wit is increasing. We Americans are the principal inventors of it, and are especially strong in the hyperbolic variety. A recent specimen worth preserving is the story that a Florida man recently killed an alligator, in whose stomach he found a hen sitting on a dozen eggs. The exaggeration turns upon the capacity of an alligator for swallowing, and the equanimity of the sitting hen. Another example is the statement that Puget Sound oysters often weigh sixty pounds apiece, and are not served on the half shell, since "nothing less than a flatboat will answer the purpose." A good collection of American hyperboles would make a very marketable book. "Turning a howitzer loose on a June bug" is a fresh specimen which we find in a daily newspaper. A "funny editor" having to report that locomotives have fallen from \$15,000 to \$8,000, adds: "We would not advise our readers to lay in their winter stock of locomotives just yet; they may go lower."

The preachers who indulge in vacations are not allowed any peace. The *New York Examiner* has found a new tender spot to thrust a pin into. A resting pastor, it thinks, has no business to work or study. He is defrauding his church if he does. But then the *Examiner* rubs the sore spot it has made by the more athletic remark that it is a sin to grind all the year through. Yes, fifty-two days of rest are required of us all. It is pleasant, by the way, to read that "the pastors are returning to their flocks," a statement which lets out the fact that the flocks did not take a vacation.

A new thing under the sun this year is the meeting of the great British Association for the Advancement of Science on American soil. The Montreal meeting was still further novel in the presence and participation of distinguished United States Americans. "Greater Britain" will doubtless more and more take part in these annual gatherings of British science. The success of the Montreal meeting will provoke the emulation of Australia, New Zealand, and British India and Africa.

Vegetarians object to eating meat because animals must be killed to supply such food. One of our quick-witted exchanges has discovered a counter argument, or rather an *ad hominem* of the you're another variety. "According to some scientists vegetables feel and perhaps think." The London *Graphic* suggests that "the blushing carrot is susceptible of tender emotions, and that the retiring ways of the truffle are due to a well-reasoned aversion to the wickedness which is to be witnessed above ground. "Perhaps" this is rather speculative.

It has been a dry summer, but it has rained financial scandals. The heaviest part of the clearing-off shower—we hope it is clearing off—fell on New Brunswick, N. J., where first the cashier and next the president of a bank committed suicide in the midst of the ruin they had wrought. That is awful, but it is morally more satisfactory and healing than the flight into Canada. When financial wreckers are hurt to the point of remorse and suicide, the horrors of the crime of genteel stealing will begin to be realized. That sin is dangerous, too. Let us thank God and take courage.

Dr. McCosh has been re-visiting the Old World, and at a breakfast party in Belfast stated an interesting fact. "In my early life," he said, "I applied for many positions which I did not get; but I never applied for the positions which I have since held." There is plenty of good wholesome use for the motto: "Let the place seek the man." It is the rule for the good places, as the case of Dr. McCosh shows. Perhaps it is more generally the rule for other places than men suppose it to be.

John Bright continues to excel in strong quotable phrases and descriptions. The House of Lords being once more in the way of reform, Mr. Bright declares that House to be filled with "the spawn of the blunders, the wars and the corruption of the dark ages of our history. They have entered the temple of honor, not through the temple of merit, but through the sepulchres of their ancestors." The last clause will probably be as lasting as his "Cave of Adullam."

A notable saying easily forgets its parentage. It is too much trouble for a busy world to remember *who* said this or that first. An expression passes into currency, and after that it is no matter who coined it. It was, we are now told, a Harvard professor who said not of Edward Everett, but of the Rev. Dr. Huntington, that his prayers were the most eloquent ever addressed to a Boston audience. The Dr. Huntington referred to was then a Unitarian of Boston, but is now Protestant Episcopal Bishop of Central New York. The *Christian at Work* is our authority for the precise facts. We do not advise any one to try to remember them.

The French have brought about a state of war in China, by a series of aggressive measures which seek the aggrandizement of France at the expense of the territorial rights of the Chinese empire. There is not the least justification for these proceedings; nor can we hope that good will come of it. The French are successful at home and failures abroad. The French cry out that England has done even the same; but that charge, if true, would not excuse France. England has, in all recent instances, had the protection of Englishmen or some other fair pretext. Even the jingoism of Beaconsfield could make some respectable covering for its brutality. The French simply want some land and mines in Tonquin "for the glory of France."

Science gets a footing everywhere. The loss of the United States steamship "Tallapoosa," by collision with a schooner, has led to an investigation to ascertain whether the officers and men on duty are afflicted with color blindness. We have a notion that in this case the old-fashioned word carelessness is more scientific than any term used by optical learning.

One of the fine points of superfine theology is that Adam was the first member of the Christian Church, and was taken in immediately after the fall. We see it—the fine point—reproduced in a religious paper. It is a pity that theology should be strained in men's eyes by such uses—especially in view of the pressing wants of the living descendants of Adam.

The making of mortgages is one of the most fascinating of employments. It is like picking up gold in chunks. Paying mortgages is another affair, a most refined species of torture which takes away and returns nothing. But people who do not expect to pay have all the pleasure and none of the pain. The semi-civilized government which owns Panama proposes to mortgage its share of the earnings of the Panama Canal for \$15,000,000. Considering that the canal may never be finished, and that it may never earn anything at all, it must be pure fun to make that mortgage. Public debts grow large easily because no particular person expects to pay any one of them. Selling such mortgages is picking up nuggets of gold—getting without effort—hence public borrowing needs conscience as a restraint.

It is a satisfaction to know that the best horses have been taken out of the hands of gamblers. Mr. Vanderbilt recently sold the queen of horses to Mr. Bonner, editor of the *New York Ledger*. On this side of the Atlantic, at least, fast horses are improving in reputation by keeping good human company.

The cholera of Asia is in Europe again after a long absence—since 1868. It has been a topic of great interest all summer, but its ravages have been comparatively insignificant. After a short period of general prevalence in Marseilles and Toulon, the unwelcome visitor went on its travels in search of dirty places in France and Italy—finding some good food in the latter country. Dirt is the delight of this scourge. Sanitary science easily handles it, keeps it within moderate limits, and stamps it out after brief duration. A renewal of the epidemic in the savage forms of 1832 and 1848 is not to be feared. The world is cleaner. The cholera has raged fiercely in Italy, especially in Naples, because sanitary reforms have made slow progress there. The people change their habits there with great reluctance, and all travelers know that Naples is the filthiest city in Europe. Wherever good sanitation prevails, cholera is checked with comparative ease. A fine use of royalty is shown by the visit of King Humbert to the afflicted towns and their hospitals.

The *New York Evening Post* irreverently refers to the Emersonian philosophy as a "mixed American drink." It is more prosaic in suggesting that the Concord School of Philosophy is not a school, and has no philosophy of a clear type, but is a continuation in summer of the winter lecture platform—a summer lyceum. We suspect that the Emersonians will not accept the amended title.

Switzerland has investigated the liquor question and found that more alcohol per head is consumed by the Swiss than by any other people in Europe. That little country spends \$30,000,000 for drink, and yet the commission which reports these facts, also declines to advise any restrictive legislation and makes a fervid eulogy of the habit of social drinking. "Public houses," they say, "foster intellectual activity, and are a remedy against misanthropy, vanity and egotism." This report is probably the most remarkable document ever produced by a committee. It gives the size of the evil in bold lines and then splashes on the gay colors with reckless prodigality.

C. L. S. C. NOTES ON REQUIRED READINGS FOR OCTOBER.

PREPARATORY GREEK COURSE IN ENGLISH.

Instead of indicating the sounds of the vowels in the Greek and Latin names given in the notes, we follow the plan of Webster's Unabridged Dictionary, giving rules for pronouncing the vowels and consonants. As the two principal marks (˘ ˙) are in Greek and Latin used differently from what they are in English, indicating the *quantity* instead of *quality*, it will be found less confusing to adopt this method.

RULES FOR THE VOWELS.

1. Any vowel at the end of an accented syllable, and *e*, *o*, and *u*, at the end of an unaccented syllable, have the long English sound.
2. *A*, ending an unaccented syllable, has the sound of *a* in *father*, or in *last*.
3. *I*, ending a final syllable, has the long sound. At the end of an initial unaccented syllable it varies between *i* long and *i* short (like *i* in *pin*). In all other cases *i*, ending an unaccented syllable, is short.
4. *Y* is like *i* in the same situation.
5. *Æ* and *æ* like *e* in the same situation.
6. If a syllable end in a consonant the vowel has the short English sound.
7. *E*, in final *es*, like *e* in *Andes*.

RULES FOR CONSONANTS.

1. *C*, before *e*, *i*, *y*, *a*, *æ*, is pronounced like *s*; before *a*, *o*, and *u*, and before consonants, like *k*.
2. *G*, before *e*, *i*, *y*, *æ*, and *a*, or another *g* followed by *e*, has the sound of *j*; before *a*, *o* and *u*, and consonants other than *g*, the hard sound.
3. *Ch* is like *k*, but is silent before a mute at the beginning of a word.
4. Initial *x* is like *z*.
5. *T*, *s* and *c*, before *ia*, *ie*, *ii*, *io*, *iv*, and *ev*, preceded immediately by the accent, change into *sh* and *zh*; but when the *t* follows *s*, *t*, or *z*, or when the accent falls on the first of the vowels following, the consonant preserves its pure sound.
6. Initial *ph*, before a mute, is silent.
7. *S* has generally the sound of *s* in *this*.
8. When two consonants like *mn*, *nn*, etc., occur at the beginning of a word, they are to be pronounced with the first consonant mute.

P. 9.—"Voltaire," vol-têr' (1694-1778). French author.

P. 11.—"Mycenæ." A city of Argos (see map in History of Greece), said to have been the leading city of Greece during the time of the Trojan war. Its remains are most interesting. The walls and the "gate of lions," supposed to belong to the ancient acropolis, and two immense subterranean chambers, the walls of which contain some of the largest blocks found in the walls of buildings, are among its antiquities.

"Cyclopean." Pertaining to a class of giants, who had but one eye in the middle of the forehead. They were said to inhabit Sicily, and to be assistants in the workshops of Vulcan, fabled to be under Mt. Etna.

"Schliemann." A German antiquarian and traveler, who claims to have discovered the genuine home of Ulysses, and also to have unearthed ancient Troy. The latter he locates on the plateau of Hisarlik.

"Arcadia," ar-ca'di-a. The central country of the Peloponnesus. It received its name of "the Switzerland of Greece" from the mountains which surround it on all sides, and traverse its surface in every direction.

P. 13.—"Laconisms," lac'o-ni'sms. A laconism; a brief pointed sentence; an expression in the laconic brief style of a Lacedæmonian or Spartan. The word is derived from Laconia, the name of the country.

"Pelopidas." A Theban noble of great fortune. He was a firm friend of Epaminondas, assisting him in driving the Spartans from Thebes and being present at the battle of Leuctra. Many important civil and military affairs were entrusted to him. In 364 Pelopidas was sent to assist the Thessalonians against Alexander, but at the battle of

E-oct

Cynoscephalæ, (see "History of Greece," p. 162,) he was slain while pursuing Alexander, whose army he had driven from the battle field.

"Miltiades." In early life Miltiades had been made tyrant of the Chersonesus. He had engaged in many wars and taken from the Persians some of their possessions. These later conquests brought on him the hostility of Darius of Persia, and Miltiades was obliged to flee to Athens, where, on the approach of the Persians, he was made one of the ten generals who commanded the Athenian army. After the battle he obtained seventy ships, ostensibly to continue hostilities, but in reality he used them to satisfy a private enmity against the island of Paros. He was unsuccessful in this and wounded. On his return he was tried and cast into prison where he died from the effects of his wounds.

P. 16.—"Ichthyologist," ich'thy-ol'o-gist. One who understands the classification of fishes.

P. 19.—"Longinus." (213?-273.) The most distinguished adherent of the Platonic philosophy in the third century. His learning was so great that he was called "a living library." He taught many years at Athens, but at last left to go to Palmyra, as the teacher of Zenobia. When she was afterward defeated by the Romans and captured, Longinus was put to death.

P. 20.—"Chrysostom. (347-407.) The "golden mouthed," so called because of his eloquence. In 397 he was made Bishop of Constantinople.

"Isocrates." (436-338 B. C.) One of the ten Attic orators. His style was artificial and labored, but exercised immense influence upon oratory at Athens.

"Renasceance," re-nâs'cence. A springing up. A becoming alive again.

P. 35.—"Academe," a'ca-de'me. Originally the name of a public pleasure ground situate in the Ceramicus, said to have belonged in the time of the Trojan war to Academus, a local hero. In the fifth century B. C. this land belonged to Cimon, who on his death gave it to the citizens as a public pleasure ground. Here Socrates talked, and Plato taught his philosophy until his school was named the Academic, and the Platonists the Academists. A school started by one of these philosophers was called an Academy.

"Hymettus," hy-met'tus. A mountain about three miles south of Athens famous for its honey and its marble.

P. 36.—"Ilissus," i-lis'sus. A river of Attica rising on Mount Hymettus, flowing through the eastern part of the city, and disappearing in the marshy plains outside.

"Lyceum." The principal gymnasium of Athens. It received the name *Lyceum* from its nearness to the temple of Apollo *Lyceios*, or Apollo the wolf slayer. Here Aristotle (to whom reference is made in the preceding line of the verse) taught his philosophy. See p. 64 of "Brief History of Greece."

"Stoa." The *stoa*, or portico, was a place enclosed by a colonnade or arcade, and used for walking in. There were several in Athens. The *Encyclopædia Britannica* says: "It is probable that some of the porticoes in the Agora were built by Cimon; at all events the most beautiful one among them was reared by Pisanax, his brother-in-law, and the paintings with which Polygnotus, his sister's lover, adorned it (representing scenes from the military history of Athens, legendary and historical), made it ever famous as the 'painted portico.'"

"Melesigenes," mel'e-sig'e-nes. Meles-born. A name sometimes given to Homer. One of the traditions of his birthplace is that he was born on the banks of the Meles, in Ionia.

"Phœbus." The bright or pure. An epithet given to Apollo (see "History of Greece," p. 72) by Homer. When Apollo became connected with the sun this name was given to him as the sun-god.

P. 38.—"Memorabilia," mém'o-ra-bil'i-a. Things to be remembered.

P. 39.—"Planudes." A Byzantine monk of the fourteenth century.

He was the editor of the Greek Anthology, the author of works on theology and natural history, as well as the collector of the fables mentioned here, and the author of *Æsop's* biography.

P. 40.—“Pessimism,” *pes’/si-mism*. The doctrine of those who believe everything to be at the worst.

P. 42.—“*Farmenio*.” A general of Philip and Alexander. He was second in command in Alexander’s Persian campaign, and did much to secure the great victories. His son being accused of being privy to a plot against the king’s life in 330 B. C., confessed himself guilty, and involved his father. Both were put to death.

P. 43.—“*Lucan*.” (39?-65.) A Roman poet.

P. 44.—“*Lyttelton*.” Lord George. (1709-1773.) An Englishman of noble family. He held various official positions, and in 1756 was raised to the peerage. The last ten years of his life were spent in literary pursuits. Beside his “*Dialogues of the Dead*,” he wrote a history of Henry II., and a work on St. Paul.

“*Fenelon*,” *fa’neh-lon’*. (1651-1715.) A French prelate and author. His most famous works, “*Dialogues of the Dead*,” “*Directions for the Conscience of a King*,” and “*The Adventures of Telemachus*,” were written for the use of the grandsons of Louis XIV, of whom he had been appointed preceptor.

“*Landor*.” (1775-1864.) An English author. His works were very voluminous, including poems, satires, dramas, etc. The work here referred to was called “*Imaginary Conversations*,” being a series of dialogues between persons of past and present times. It was said to have greatly increased the author’s literary reputation.

“*Erasmus*,” *e-ráz’/mús*. (1467-1536.) A Dutch classical scholar of wide reputation. At the time that Luther advanced the tenets of the reformers Erasmus would not adopt these extreme views. Luther ridiculed and denounced the scholar, and Erasmus retorted by turning his wit against the monastic habits and scholastic dignity.

P. 45.—“*Phidias*,” *phid’/i-as*. (B. C. 490?-432.) The greatest of Grecian sculptors. His chief works were the *Athene* of the *Acropolis*, the *Zeus* at *Olympus*, and the decorations of the *Parthenon*, in which he was assisted by his pupils.

“*Alcámenes*,” *al-cam’e-nés*. (B. C. 444-400.) A pupil of *Phidias*. His greatest work was a statue of *Venus*.

“*Myron*.” A Boeotian sculptor, born about 480 B. C. His masterpieces were all in bronze. The *Quoit-player* and the *Cow* are most famous. *Myron* excelled in animals and figures in action.

“*Euphranor*.” A sculptor and painter of Athens who flourished about 360 B. C. His finest statue was a *Paris*, and his best paintings adorned a porch in the *Ceramicus*. He also wrote on proportion and colors.

P. 46.—“*Polycleitus*,” *pol’y-clei’tus*. A Greek sculptor who lived about 430 B. C. His statues of men are said to have surpassed those of *Phidias*. The *Spear-bearer* was a statue so perfectly proportioned that it was called the canon or rule.

“*Bendis*,” *ben’dis*; “*Atthis*,” *at’tis*; “*Men*.” Local deities among the Egyptians.

“*Anubis*.” One of the Egyptian deities, the son of *Osiris*. He was represented in the form of a man with a dog’s head, or as a dog. His name meant gilded, and his images were of solid gold.

“*Lysippus*.” The favorite sculptor of Alexander the Great. His statues were all in bronze, and it is said reached the number of 1,500.

“*Pentelicus*.” A mount in Attica celebrated for its marble.

“*Praxiteles*.” Born at Athens B. C. 392. He worked in both marble and bronze. About fifty different works by him are mentioned. First in fame stands the *Cnidian Venus*, “one of the most famous art creations of antiquity.” *Apollo* as the lizard-killer, his *Faun*, and a representation of *Eros* are probably best known.

P. 47.—“*Colossus of Rhodes*.” A bronze statue of the sun which stood at the entrance of the harbor of Rhodes. It was one hundred and five feet in height, cost three hundred talents, and was twelve years in erecting. The *Colossus* was designed by *Chares*.

“*Pnyx*,” *níks*. The place of public assembly in Athens.

P. 48.—“*Philippics*.” The orations delivered by *Demosthenes* against Philip of Macedonia.

P. 50.—“*Paley*,” *William*. (1743-1805.) An English theologian. The author of several valuable works. In the “*Natural Theology*” here

referred to he attempts to demonstrate the existence and perfect character of God from the evidences of design in nature.

P. 51.—“*Helvetius*,” *hél-vee’shi-us*. *Claude Adrien*. (1715-1771.) A French philosopher. The author of a famous work on the materialistic philosophy.

“*Mellaniippides*,” *mel’a-nip’pi-des*. A celebrated poet of Melos who lived about B. C. 440.

“*Zeuxis*.” A painter who lived in the latter part of the fifth century B. C. Part of his life was spent in the practice of his art in Macedonia, thence he went to Magna Græcia, where at Croton he painted his masterpiece, a *Helen*. *Zeuxis* made a great fortune by his painting.

P. 61.—“*Diogenes*.” He came from Laërte, in Cilicia, and probably lived in the second century A. D. He is the author of “*The Lives of the Philosophers*,” a work in ten books. Almost nothing is known of his life.

P. 62.—“*Tacitus*,” *tac’i-tus*. (A. D. 55-117.) A Roman historian. His histories of the condition and customs of the Britains and Germans are trustworthy accounts, written in a clear and concise style. A history of Rome is his most ambitious work. The “*Germania*” mentioned was a history of the origin, customs, situation and peoples of Germany.

P. 70.—“*Darics*,” *dár’ic*. The word is derived from *Darius*, and applied to an ancient Persian coin weighing about 128 grains, and bearing on one side the figure of an archer.

BRIEF HISTORY OF GREECE.

P. 2.—“*Freeman*,” *Edward*. (1823—.) An English historian, the author of several valuable works.

P. 3.—“*Amphictyonic*,” *am-phic’ty-on’ic*.

“*Nabonassar*,” *na-bon-nas’ser*. A king of Babylon, the date of whose accession was fixed by the Babylonian astronomers as the era from which they reckoned. It began February 26, B. C. 747.

“*Medea*,” *me-de’a*. The daughter of the king of Colchi by the aid of whose charms (she was a powerful sorceress) *Jason* obtained the fleece.

“*Alcmene*,” *alc-me’ne*. The daughter of the king of Mycenæ. Her promised husband being absent, *Jupiter* assumed his form and under this disguise married her.

“*Eurystheus*,” *eu-rys’the-us*.

P. 4.—“*Meleager*,” *me’le-a’ger*; “*Theseus*,” *the’se-us*; “*Calydon*,” *cal’y-don*. An ancient city of *Ætolia* (see map of Greece).

“*Menelaus*,” *men’e-la’us*; “*Agamemnon*,” *ag’a-mem’non*.

“*Achilles*,” *a-chil’les*.

P. 5.—“*Odyssey*,” *ód’ ys-sey*; “*Ulysses*,” *u-lys’ses*.

“*Ithaca*,” *ith’a-ca*. A small island in the Ionian Sea off the coast of *Epirus*. “*Penelope*,” *pe-nel’o-pe*.

“*Pelops*,” *pe’lops*. Fabled to have been the son of *Jupiter*. The king of *Pisa* in *Elis* from whom the peninsula of Greece, the *Peloponnesus*, took its name.

P. 6.—“*Cyrene*,” *cy-re’ne*; “*Massilia*,” *mas-sil’i-a*.

P. 9.—“*Messenia*,” *mes-se’ni-a*. For these wars see page 97 of History. “*Cecrops*,” *ce’crops*; “*Codrus*,” *co’drus*.

P. 10.—“*Areopagus*,” *ár-e-óp’a-gús*.

P. 11.—“*Hippias*,” *hip’pi-as*; “*Hipparchus*,” *hip-par’chus*.

“*Alcmæonidæ*,” *alc’mæ-on’i-dæ*; “*Megacles*,” *meg’a-cles*.

P. 13.—“*Ahura Mazda*,” or *Ormuzd*, *a-hu’ra*, *maz’da*. The supreme deity of the ancient Persians.

P. 14.—“*Mardonius*,” *mar-do’ni-us*; “*Athos*,” *a’t hos*.

P. 15.—“*Phidippides*,” *phi-dip’pi-des*.

P. 16.—“*Dionysiac*,” *di-o-nys’i-ac*. See page 75 of History.

“*Pan*.” The god of flocks and shepherds among the Greeks.

P. 18.—“*Demaratus*,” *dem’a-ra’tus*.

P. 20.—“*Simonides*,” *si-mon’i-des*.

P. 21.—“*Himera*,” *him’e-ra*. See map in History. “*Gelo*,” *ge’lo*;

“*Pausanias*,” *pau-sa’ni-as*; “*En route*,” On the way.

P. 22.—“*Diodorus*,” *di-o-do’rus*. A historian of the time of Augustus Cæsar.

P. 24.—“*Eurymedon*,” *eu-rym’e-don*. A small river in Pamphylia.

P. 25.—“*Ephialtes*,” *eph’i-al’tes*. An Athenian statesman, the friend of *Pericles*.

P. 27.—“*Melos*,” *me’los*; “*Thera*,” *the’ra*; “*Corcyra*,” *cor-cy’ra*;

"Zacynthus," *zay-n'thus*; "Chios," *chi'os*; "Naupactus," *nau-pac'tus*; "Acarnania," *ac-ar-na'ni-a*; "Ambracia," *am-bra'ci-a*; "Anactorium," *an-ac-to'ri-um*.

P. 28.—"Archidamus," *ar'chi-da'mus*.

"Colonus," *co-lo'nus*. A demus of Attica lying about a mile northwest of Athens.

"Acharnae," *a-char'nae*. The chief demus of Attica, nearly seven miles north of Athens. Its people were warlike, and its land fertile.

P. 29.—"Paralus," *par'a-lus*.

P. 31.—"Alcibiades," *al-ci-bi'a-des*; "Nicias," *nic'i-as*.

P. 32.—"Gylippus," *gy-lip'pus*; "Deceia," *dec'e-lei'a*.

P. 34.—"Antalcidas," *an-tal'ci-das*. A Spartan statesman, through whose diplomacy this treaty was brought about.

P. 35.—"Megalopolis," *meg-a-lop'o-lis*.

P. 36.—"Mantineia," *man'ti-ne'a*.

P. 37.—"Charonea," *char-o-ne'a*.

P. 38.—"Tetradrachm," *tet'ra-dram*. Four drachmas. An ancient silver coin, worth about 79 cents.

"Illyrians," *il-lyr'i-ans*. The inhabitants of Illyria, a country west of Macedon.

"Temple of Diana." The Ephesian Diana personified the fructifying power of nature, and was represented as the goddess of many breasts. Of the temple the "American Encyclopedia" says: "Its (Ephesus) chief glory was its magnificent temple of Diana, and the city did not decay until the Goths destroyed the temple. The Ionian colonists found the worship of Diana established and the foundations of the temple laid."

"Gordium." The ancient capital of Phrygia, named from Gordius. See page 178 of Greek History.

"Callisthenes," *cal-lis'the-nes*.

P. 39.—"Granicus," *gra-ni'cus*; "Issus," *is'sus*; "Arbela," *ar-be'la*; "Persepolis," *per-sep'o-lis*.

P. 40.—"Gedrosia," *ge-dro'si-a*; "Roxana," *rox-a'na*; "Hydaspes," *hy-das'pes*. The northernmost of the five great tributaries of the Indus.

P. 41.—"Rawlinson," George. (1815—) An English historian and orientalist.

P. 42.—"Rameses," *ra-me'ses*. The Egyptian kings of the nineteenth and twentieth dynasties, who ruled for nearly three hundred and fifty years, beginning about 1460 B. C.

"Pharos." A lofty tower built for a light-house upon a small island off the Mediterranean coast of Egypt. The name of the island was Pharos, and was given to the tower.

"Ptolemy," *tol'e-mi*. Sator (the savior) was a title given him by the inhabitants of Rhodes, whom he had saved from a siege.

"Philadelphus." Distinguished for brotherly love. Ptolemy had taken this title to signalize his love for his sister whom he had married, a union which Egyptian law allowed.

"Euergetes," *eu-er'ge-tes*. Benefactor. This surname was given him by the Egyptians when from a campaign into Syria he brought back the idols which Cambyses had carried off to Persia.

"Septuagint," *sep'tu-a-gint*. "So called because it was said to have been the work of seventy, or rather of seventy-two, interpreters."

P. 43.—"Archimedes," *ar-ki-me'dez*. (B. C. 287?-212.) A famous mathematician of Syracuse.

"Hera," or Heron, *he'ro*. A Greek mathematician of the third century.

"Apelles," *a-pel'les*. The most famous of Grecian painters. A friend of Alexander's, and the only painter he allowed to take his portrait.

"Hipparchus," *hip-par'chus*. Called the father of astronomy. A Greek who lived at Rhodes and Alexandria.

"Ptolemy." A celebrated mathematician, astronomer and geographer. Of his history we know nothing, but still have a large number of his treatises on a great variety of subjects.

"Euclid," *yoo'klid*. The mathematician who gave his name to the science of geometry. Nothing is known of his history.

"Eratosthenes," *er-a-tos'the-nes*. One of the most learned men of his day. He cultivated astronomy, geography, history, philosophy, grammar and logic. But fragments of his writings remain.

"Strabo." A native of Pontus. Lived during the reign of Augustus. He wrote a historical work now lost, and a famous treatise on geography, in seventeen books. This latter is nearly all extant.

"Manetho," *man'e-tho*. An Egyptian priest who lived in the reign of Ptolemy I. He wrote in Greek a history of Egypt from which we have the dynasties of Egypt's rulers saved, though the work is lost, and an account of the religion of his country.

"Aristophanes," *ar'is-toph'a-nes*. A native of Byzantium. He lived in the reigns of Ptolemy II. and III., and had control of the library of Alexander.

"Apollonius," *ap'ol-lo'ni-us*. A native of Alexandria, sometimes called "the Rhodian," as he was honored with franchise by Rhodes, where he taught rhetoric successfully. His greatest poem, still extant, was a description of the Argonautic expedition.

"Sosigenes," *so-sig'e-nes*. A peripatetic philosopher of Alexandria.

"Origen," *or'i-gen*. (185?-254?) One of the most voluminous of early Christian writers.

"Athanasius," *ath'a-na'si-us*. (296?-373.) A native of Alexandria, made archbishop of the city in 326. He was subject to great persecution from the Arians who held that Christ was a being inferior to God, while Athanasius held to the orthodox belief.

"Antiochus," *an-ti'o-chus*; "Seleucidæ," *se-leu'ci-dæ*.

P. 44.—"Eumenes," *eu-me-nes*; "Arsacidæ," *ar-sa'ci-dæ*. "Brennus," *bren'nus*.

P. 45.—"Justinian," *jus-tin'i-an*. Byzantine emperor.

"Antiochus," *an-ti'o-chus*. Of Ascalon. The founder of the Fifth Academy, and the teacher of Cicero while he studied at Athens. He had a school at Alexandria, and one in Syria also.

"Ptolemæum," *ptol'e-mæ'um*. A large gymnasium built by Ptolemy Philadelphus.

"Dipylum." A gate on the northwestern side of the city wall. So called because consisting of two gates. It is the only one whose site is absolutely certain.

"Speusippus," *speu-sip'pus*. An Athenian philosopher. A nephew of Plato, whom he succeeded as president of the First Academy.

"Xenocrates," *xe-noc'ra-tes*. (396-314 B. C.) A philosopher who succeeded Speusippus as president of the Academy.

"Polemon," *pol'e-mon*. The Athenian philosopher who succeeded Xenocrates as president of the Academy.

P. 46.—"Autochthon," *au-tok'thon*; "Phratries," *phra'tres*; "Apollo Patroüs," *pa-trô'us*.

"Ion," *i'on*. Fabled to have been the ancestor of the Ionians, from whom they took their name.

P. 48.—"Lucian," *lu'shan*. See page 65 of History. "Menippus," *me-nip'pus*; "Strepsiadæ," *strep-si'a-dæ*.

P. 50.—"Ion." Of Ephesus. One of Plato's dialogues is named from him.

P. 51.—"Tyrtaeus," *tyr-tæ'us*.

P. 52.—"Lesbian," *les'bi-an*. From Lesbos. A large island off the coast of Asia Minor.

"Alcæus," *al-cæ'us*; "Anacreon," *a-na'cre-on*.

"Christopher North." The *nom de plume* of John Wilson, a Scottish author. (1785-1854.)

"Dionysos," *di-o-ny'sus*.

P. 53.—"Thespiis," *thes'pis*; "Trilogy," *tril'o-gy*.

P. 54.—"Prometheus," *pro-me'the-us*.

P. 55.—"Jocasta," *jo-cas'ta*.

P. 59.—"Halicarnassus," *hal'i-car-nas'sus*. See map.

P. 62.—"Thales," *tha'les*; "Anaximander," *a-nax'i-man'der*; "Anaxagoras," *an'ax-ag'o-ras*; "Hippocrates," *hip-poc'ra-tes*; "Pythagoras," *py-thag'o-ras*; "Crotona," *cro-to'na*.

P. 63.—"Marsyas," *mar'sy-as*. A satyr who had found a flute discarded by Athene, which emitted beautiful sounds of its own accord. Elated he challenged Apollo to a musical contest, but was defeated. Apollo flayed him alive for his presumption in contesting with him.

P. 65.—"Antisthenes," *an-tis'the-nes*.

"Ceramicus," *cer'a-mi'cus*. A district of Athens, so called from Ceramus, the son of Bacchus, some say, but more probably from the potter's art invented there.

P. 69.—"Alpheus," *al-phe'us*. The chief river of the Peloponnesus. See map.

"Choragic," *cho-rî'g'ic*; "Lysicrates," *ly-sic'ra-tes*. In 355 B. C.

Lysicrates was chosen choragus (p. 76) and took the prize. In honor of this event he erected this monument.

"Callimachus," *cal-iim'a-chus*. An architect and statuary, who probably lived about 400 B. C. Very little is known of his life.

P. 70.—"Propylea," *prop'y-le'a*; "Apollodorus," *a-pol'lo-do'rus* (440 B. C.); "Rembrandt," *rém'bránt* (1607-1669). A famous Dutch painter. "Parrhasius," *par-rha'si-us* (400 B. C.).

P. 71.—"Protagenes," *pro-tog'e-nes* (330 B. C.); "Nicias," *nic'i-as* (320 B. C.); "Pausias," *pau'si-as* (360 B. C.); "Scopas," *sco'pas* (395-350 B. C.).

"Niobe," *ni'o-be*. The subject is the vengeance of Apollo and Artemis upon the Theban Queen Niobe, who boasted that because of her fourteen children she was superior to Leda, who had but two. As a punishment all her children were destroyed.

"Mausoleum," *mau-so-le'um*. A monument built over the remains of Mausolus, king of Caria, by his wife Artemesia.

P. 72.—"Poseidon," *po-sei'don*; "Demeter," *de-me'ter*; "Hestia," *hes'tia*; "Hephestos," *he-phæs'tos*; "Aphrodite," *aph'ro-di'te*.

P. 73.—"Ariadne," *a-ri-ad'ne*; "Hesperides," *hes-per'i-des*; "Mnemosyne," *mne-mos'y-ne*; "Parnassus," *par-nas'sus*; "Clio," *cli'o*; "Melpomene," *mel-pom'e-ne*; "Thalia," *tha'li-a*; "Calliope," *cal-li'o-pe*; "Urania," *u-ra'ni-a*; "Euterpe," *eu-ter'pe*; "Polyhymnia," *pol'y-hym'ni-a*; "Erato," *er'a-to*; "Terpsichore," *terp-sich'o-re*.

"Dodona," *do-do'na*. In Epirus.

P. 75.—"Panathenaia," *pan-ath'e-nai'a*.

"Erechtheum," *er'ech-thei'um*. So called because Erechtheus, a former king of Athens, was said to have been buried there.

"Athene Polias." The name given to Athene when she was represented as protectress of the state.

P. 77.—"Kallirhoë," *kal-lir'ho-ë*. A famous well of Athens, still called by its ancient name.

P. 78.—"Obolus," *ob'o-lús*. A small silver coin, worth about three cents.

"Cinerary," *cin'er-a-ry*. The word means pertaining to ashes, and was applied to those urns used by the ancients to hold the ashes of the dead.

P. 80.—"Gizeh," *jee'zeh*, or *gee'zeh*. A village of Egypt three miles from Cairo. The three great pyramids are but five miles from Gizeh.

"Labyrinth." The one here referred to was at Arsinoë, in Egypt.

P. 81.—"Hippodrome," *hip'po-drome*; "Platanista," *plat-a-nis'tæ*; "Eurytus," *eu'ry-tus*; "Aristodemos," *a-ris'to-de'mus*.

P. 82.—"Cynosarges," *cyn'o-sar'ges*. A gymnasium built for Athenians born of foreign mothers.

"Antisthenes," *an-tis'the-ses*.

"Lycabettus," *lyc-a-bet'us*. A mountain northeast of Athens and close to the wall.

P. 93.—"Epidaurus," *ep'i-dau'rus*; "Troezen," *troe-zen'*; "Phlius," *phli'us*; "Sicyon," *sish'i-on*; "Malea," *ma-le'a*; "Pheidon," *phi'don*.

P. 94.—"Eurysthenes," *eu-rys'the-ses*. "Procles," *pro'cles*.

P. 96.—"Carystus," *ca-rys'tus*. A town on the southern coast of Euboea.

"Diagorids," *di-ag'o-rids*. So called from Diagoras, of Rhodes, the first of the family who distinguished himself in the Grecian games.

"Aristomenes," *ar-is-tom'e-ses*. See page 99 of History.

P. 97.—"Prytaneum," *pryt'a-ne'um*. "A public hall in Athens regarded as the home of the city, in which the duties of hospitality were exercised on behalf of the city to its own citizens and strangers."

P. 98.—"Amphia," *am-phi'a*; "Ithome," *i-tho'me*; "Theopompus," *the'o-pom'pus*.

P. 99.—"Stenyclaros," *sten'y-cla'ros*.

P. 100.—"Ceadas," *ce'a-das*; "Rhegium," *rhe'gi-um*.

"Bacchiad." So called from Bacchis, king of Corinth. They had held the supreme power for a long time.

P. 101.—"Eëtion," *e-e'ti-on*.

"Lapithæ," *lap'i-thæ*. So called from their ancestor, Lapithes. They were inhabitants of Thessaly, and are fabled to have fought with the Centaurs and defeated them. "Cypselus," *cyp'se-lus*.

P. 102.—"Thrasylbulus," *thras'y-bu'lus*; "Lycophron," *lyc'o-phron*.

P. 103.—"Sancho Panza," *sánk'o pán'za*. The esquire of Don Quixote. "Eupatrids," *eu'pa-trids*.

P. 104.—"Stadium," *sta'di-um*. A Greek measure of length of a little over six hundred feet. "Theagenes," *the-ag'e-nes*.

P. 105.—"Diasia," *di-a'si-a*. The name is derived from the Greek word for god and means pertaining to the god.

"Prytanes," *pryt'a-nes*. A member of one of the ten sections into which the senate was divided.

P. 106.—"Eumenides," *eu-men'i-des*. The avenging deities, or the Furies. "Geomori," *ge-om'o-ri*.

P. 109.—"Hyperakrians," *hy'per-ak'ri-ans*.

"Pediaian," *ped-i'ai-an*; "Paralian," *par-a'li-an*.

P. 110.—"Lygdamis," *lyg'da-mis*; "Aristogiton," *a-ris'to-gi'ton*; "Harmodius," *har-mo'di-us*.

P. 111.—"Sigeion," or Sigeum, *si-gei'on*. A promontory of Asia Minor at the entrance to the Hellespont.

"Lampsacene," *lamp'sa-ce-ne*. So called from Lampsacus, a city of Asia Minor on the coast of the Hellespont.

P. 112.—"Phaleron," *pha-le'ron*. The most easterly of the harbors of Athens. "Cleomenes," *cle-om'e-nes*.

P. 116.—"Diocenes," *di-en'ces*.

P. 118.—"Iacchus," *i-ac'chus*. A name given to Bacchus in the Eleusinian Mysteries. On the sixth day of the festival occurred this procession.

"Æacidae," *æ-ac'i-dæ*. The descendants of Æacus, among whom were Peleus, Achilles and Pyrrhus.

P. 119.—"Egaleos," *æ-ga'le-os*.

P. 120.—"Psyttalea," *psyt'ta-le'a*.

"Munychia," *mu-nych'i-a*. Artemis, or Diana, had a temple on a hill called Munychia, in the peninsula of Piræus.

P. 122.—"Ecclesia," *ec-cl'e-si-a*. The public legislative assembly of the Athenians.

"Dicastery," *di-cast'e-ry*. The assembly of the jurymen: a court of justice.

P. 125.—"Timocreon," *ti-mo'cre-on*. A lyric poet of Rhodes.

P. 127.—"Eion," *e-i'on*; "Strymon," *stry'mon*.

"Cyclades," *cyc'la-des*. A group of islands in the Ægean Sea. So called because they lay in a circle around Delos, the most important of them.

P. 130.—"Mounychia," written, also, Munychia. One of the three harbors of the Piræus.

"Sounion," *sou'ni-on*, also written Sunium. The promontory at the southern extremity of Attica.

P. 133.—"Sybota," *syb'o-ta*. A number of small islands off the coast of Epirus, opposite Corcyra.

P. 138.—"Clazomenæ," *cla-zom'e-næ*. A city of Asia Minor. See map.

P. 140.—"Andocides," *an-doc'i-des*. (B. C. 467-393?) One of the ten Attic orators.

"Adonia," *a-do'ni-a*. An annual festival held in honor of Adonis, a beautiful youth loved by Venus, who was killed by a wound received while on the chase.

P. 141.—"Theramenes," *the-ram'e-ses*; "Critias," *crit'i-as*.

P. 142.—"Dracontides," *dra-con'ti-des*.

P. 143.—"Anytus," *an'y-tus*; "Meletus," *me-le'tus*; "Lycon," *ly-con*.

"Argimise," *ar'gi-mi'sæ*. Three small islands opposite Mytilene in Lesbos. The Athenians defeated the Lacedæmonians there in B. C. 406.

P. 154.—"Cardouchian," *car-dou'chi-an*. See map, p. 64, of Preparatory Greek Course.

P. 155.—"Cheirisophos," *chei-ris'o-phos*; "Taochi," *ta'o-chi*. See same map as preceding.

P. 158.—"Orchomenians," *or'chom-e'ni-ans*. Inhabitants of Orchomenus, a city of Arcadia.

P. 160.—"Itonian," *i-to'ni-an*. A name of Athene, derived from the town of Iton, in Thessaly, where she had a temple.

P. 165.—"Polibius," *po-lib'i-us*. (B. C. 204?-122?) Greek historian.

P. 184.—"Kurdistan," *koor-dis'tân*; "Gangamela," *gan'ga-me'la*.

P. 188.—"Bessos," *bes'os*. The satrap of Bactria who put Darius to death, in B. C. 330, and assumed the title of king.

NOTES ON REQUIRED READINGS IN "THE CHAUTAUQUAN."

WHY WE SPEAK ENGLISH.

P. 2, c. 2.—"Erse," erish. A Celtic language, properly called the Gaelic, but by the Scotch Highlanders called Erse.

"Bengali," ben-gal'ee. The dialect spoken in Bengal.

"Brahmans," brāh'mans. The priests who officiated in the Hindoo ceremonials. The devotees and worshippers sometimes received this name.

"Vedas," vē'das. "Punctilio," punc-til'yo. Exactness in forms, conduct or ceremony.

P. 3, c. 1.—"De Chesy," deh sha'ze/. (1773-1832.) He was an orientalist of some renown.

"Bopp," (1791-1867.) A German professor of oriental languages in the University of Berlin during most of his life.

"Grimm," (1785-1863.) A German philologist and voluminous writer.

"Joorkistan," joor-kis-tan'.

"Hindoo Kosh." Also spelled Kush, Koosh, or Kusch. A range of mountains in Central Asia.

"Oxus," ox'us. Called also the Amoo, the Gihon, or Jehoon.

P. 3, c. 2.—"Lithuanian," lith'u-a'ni-an.

P. 4, c. 2.—"Mæso-Goths." Mæsia, or Mysia, was a country of Europe occupying about the same territory as do Servia and Bulgaria today. It was occupied by the Goths in the fourth century. They were called Mæso or Mæso-Goths.

"Ulphilas," or Ulfilas, ūl'fī-las. (310-381.) The family of Ulfilas were Christians supposed to have been carried away by the Goths. In 341 he became the bishop of these people and soon induced a number of them to leave their warlike life to settle a colony in Mæsia. Here he cultivated the arts of peace, doing much to civilize the people. He introduced an alphabet of twenty-four letters, and translated all of the Bible except the book of Kings.

HOME STUDIES IN CHEMISTRY AND PHYSICS.

P. 5, c. 1.—"Cabalistic," cab'a-lis'tic. Anything consisting of symbols which have a hidden meaning is called cabalistic.

"Berzelius," ber-zee'li-us. (1779-1848.) A Swedish chemist.

P. 5, c. 2.—"Faraday," fār'a-da. (1791-1867.) An English chemist and natural philosopher.

"Cracow." The former capital of Poland. The "beds" referred to are the Wieliczka (we-litch'ka) salt mines a few miles from the city.

"Davy," da'vi Sir Humphrey. (1778-1829.) An English chemist of whom it has been said that "since the days of Sir Isaac Newton the history of British science has recorded no discoveries of equal importance with those of Sir Humphrey Davy."

P. 6, c. 1.—"Cavendish," (1730-1810) An English chemist and mathematician. The discoverer of hydrogen, of the composition of water, and the founder of pneumatic chemistry.

"Priestly," preest'le, Joseph. (1783-1804.) An English chemist and theologian.

"Black," (1728-1799.) A chemist and physician of Edinburgh. His chief researches were set forth in his experiments on "Magnesia, Quicklime and other Alkaline Substances." He also originated the theory of latent heat.

"Rutherford," rūth'er-ford. (1749-1819.) A Scottish physician and botanist.

"Eudiometer," eu'di-om'e-ter. An instrument for measuring the amount of oxygen contained in a given bulk of elastic fluid.

"Drummond Light." So called from Thomas Drummond. (1797-1840.) A British naval officer, the inventor of the light.

P. 6, c. 2.—"Iridium," i-rid'i-um. One of the metallic elements.

P. 7, c. 1.—"Fluorine," flū'or-ine.

"Monsieur Goffart," mo-seer' gof'fār'.

"Silos," si'lōs. A subterranean pit for keeping grain.

"Carbonic Anhydride," car-bon'ic an-hy'dride. The term *anhydride* means that the substance to which it is applied is derived from an acid by the removal of the water. That is, in this case *carbonic anhydride* is carbonic acid minus the water.

P. 7, c. 2.—"Terra-firma." The Latin for firm land. "Manga-

nese," mán'ga-nese'. "Catalysis," ca-tál'y-sis. A dissolution into parts.

P. 8, c. 2.—"Pneumatic trough," pneu-mat'ic. A trough used for experiments with gases.

STUDIES IN KITCHEN SCIENCE AND ART.

P. 8, c. 1.—"Solanum Tuberosum," sō-la'num tū-be-ro'sum. A nightshade bearing tubers.

"Solanaceæ," sō'la-na'ce-æ. The family of night-shades.

"Belladonna," bel'la-dōn'na. Deadly night shade. The name means "fine lady." So called because formerly used as a cosmetic.

"Hyoscyamus," hi'os-ci'a-mus. Henbane.

"Stramonium," stra-mō'ni-um. Commonly called Jamestown weed, or thorn apple.

P. 8, c. 2.—"Protein," prō'tein.

"Carb-hydrates." Compounds of carbon and water.

P. 10, c. 1.—"A la crème," ā lā crām. With cream.

"Julienne," zhū'le-en; "Parisienne," pā-re'ze-èn'. Parisian.

"A la Française," ā lā frān'sā'. In the French fashion.

"A la Provençale," ā lā prō'vān'sāl'. In the provincial style.

"A la Barigoule," bā're-gool'.

P. 10, c. 2.—"Maitre d'hotel," matr'dō-tel'. Literally the head master of the hotel.

"Polonaise," pō'lo-naz'. Polish.

P. 11, c. 1.—"Purée," pu'ra'. Soup.

"Potage Parmentier," pō'tāg pār-mon'te-ā. Parmentier's soup.

GLIMPSES OF ANCIENT GREEK LIFE.

P. 13, c. 1.—"Daphnis and Chloe," daph'nis, klō.

P. 13, c. 2.—"Tiryns," ti'ryns; "Acrocorinthus," ac'ro-co-rin'thus.

TEMPERANCE TEACHINGS OF SCIENCE.

P. 17, c. 2.—"Condorcet," kon'dor'sa'. (1743-1794.) French metaphysician.

P. 18, c. 2.—"Rousseau," roo'sō'. (1670-1741.) A French lyric poet. "Hasheesh," hash'eesh. A gum-resin in hemp. It is produced by boiling the leaves and flowers of the common hemp with a little butter.

"Absinthe," ab-sinthe'. Made from brandy flavored with wormwood.

P. 19, c. 1.—"Brisse," brēs; "soma," sō'ma; "koumiss," kou'miss.

"Aloe," al'ō. A genus of trees belonging to warm climates.

"Cinnabar," cin'na-bar. A compound of sulphur and mercury.

"Acetate," ac'e-tate. A compound formed of acetic acid (the acid which we find diluted in vinegar) and copper.

"Ashantee," a-shan'tee. A savage tribe on the west coast of Africa.

"Oaxaca," wā-hā'kā.

"Chamisso," shā-mis'ō. (1781-1838.) A German naturalist, poet and traveler. His *Travels (Reisen)* are among his important works.

"Dhurra," dur'ra. Indian millet or Guinea corn, cultivated in Asia and southern Europe.

"Belzoni," bel-zō'nee. (1778?-1823.) An Italian traveler and explorer.

"Druses." A people living on Mount Lebanon. They have a religion peculiar to themselves and of which little is known.

P. 19, c. 2.—"Armida," ar-mee'dā. Armida is one of the most prominent female characters in Tasso's "Jerusalem Delivered." The poet tells us that when the crusaders reached the holy city, Satan held a council to devise some means of distracting the plans of the Christian warriors, and Armida, a very beautiful sorceress, was employed to seduce Rinaldo and other crusaders. Rinaldo was conducted by the sorceress to a remote island, where in her splendid castle, surrounded by delightful gardens and pleasure grounds he quite forgot his vows and the great object to which he had devoted his life.

P. 20, c. 1.—"Bernard," bér'nār'. (1813-1870.)

"Kirschwasser," keersh'wās-ser. Cherry water. Made by fermenting the small black cherry.

"Diathesis," di-ath'e-sis. The peculiar constitution of a man which predisposes him to a particular disease.

THE CHAUTAUQUA UNIVERSITY.

The Chautauqua University, (projected several years ago), was incorporated by act of the Legislature of the State of New York in the spring of 1883. The section of the act giving its object reads as follows: "The leading object of said corporation shall be to promote liberal and practical education, especially among the masses of the people; to teach the sciences, arts, languages and literature; to prepare its patrons for their several pursuits and professions in life, and to fit them for the duties which devolve upon them as members of society; such instruction to embrace all departments of culture which the board of trustees may deem useful and proper." In further elucidation of the idea, the Chancellor of the University, Rev. J. H. Vincent, D.D., has said: The design of The Chautauqua University is to aid the following persons in the acquisition of a liberal and practical education: (1) Worthy young people not able to go to college; (2) those who, having begun a college course, have been compelled to abandon it by circumstances beyond their control; (3) a class of more mature men and women who, at the maximum of their mental power, desire to make amends for the educational omissions of the earlier years.

The wisdom of the men who have devised this plan is apparent to any observer. The proportion of those who are able to reap the advantages of a college education is small, and of these there are two distinctly marked classes. First, are those who, from choice and natural taste, with means to gratify that taste, seek a higher education, giving to the pursuit an earnest and untiring devotion. From this class come the scholars, professors and specialists of the hour. Second, are those who are put within the sphere of college training by external influences, and who are carried to the completion of their prescribed duties only under authority. Outside of the small number embraced in these two classes is the vast multitude of our citizens—elderly men, in active life, who look backward with regret to the unimproved opportunities of early days; middle aged men, longing to drink at the fountain of eternal youth which sends forth its delightful streams through the fields of knowledge; young men, with aspirations and throbbings of conscious power if only opportunity can be found to give their endowments play; boys on farms, behind counters and in shops, who look with half-concealed envy at their more fortunate play-fellows of the earlier years, who are in school, academy or college, while for them, daily toil with scanty remuneration is the price of support for daily life; matrons sighing over life's burdens, and mourning over the fate which has shut to them the doors of education; young women, whose fingers, guided by a gifted brain, might have wrought marvels in art if only they had been taught how; and who long even yet to know—only to know. Of all such the world is full, and they can not go to college. Again must "Mahomet go to the mountain." As they can not go to the university, say the incorporators of this Chautauqua University, the university shall go to them. We will make a people's university which shall cover the widest possible scheme of study. We will make it eclectic, so that each seeker for knowledge can work in lines best suited to his own endowments. We will make it possible for the man who has been taken out of his college course before its completion, to finish it to his own satisfaction, in his own way, and in the station where Providence has placed him. We will enter every open door with our fireside college. We will make no restriction as to age or sex. We will make no limitation as to the time occupied in the completion of the work which we demand. We will make a Universal University.

The Chautauqua University thus outlined is as an institution *unique*. Its local habitation is an office in the city of Plainfield, New Jersey. Its name is as given above. New England mountain ranges, the fertile hills and valleys of the Middle States, the prairies, the cañons and ranches of the broad West and the wide-spreading plantations of the South, are its campus. Its dormitories are the homes of the land; its chapel the Church of Christ, in its most catholic spirit and form; its curriculum is as wide and comprehensive as are the fields of knowledge; its text-books are standards, whether in the department of classics, ancient or modern, mathematics or science, art, or the humanities; its chairs are filled by specialists, men of ability in their respective realms; its library is the most magnificent in the wide world, being the aggregate of all the books of all the homes out of which our students shall come, and all public and private libraries to which they have access. Its examinations will be as thorough, rigid, critical and impartial as the severest scholarship can wish. Its diploma will be awarded only after a successful passing of all the examinations prescribed, and will be a well-earned guerdon of conscientious labor—a diploma which will be an honor to its holder, and will command the respect of even the highest of the already established universities.

Such is the non-resident Chautauqua University; a university complete in all its purposes, perfect in its plan of organization, its constituency the largest in the world, its dome the overarching blue, its center Chautauqua, the grandest educational outgrowth of the century. The means by which advancement in the Chautauqua University shall be attained is correspondence. This idea, though not entirely new, nor confined exclusively to Chautauqua, is yet recent enough in its American adaptations, to come as a novelty to the majority of those who will become students in this university, and will through university channels achieve a practical realization, which will make Chautauqua the home of its adoption. This correspondence presupposes earnest, unflagging, indefatigable study. The class-room finds its chief work to be the testing of results—the detection of false methods of investigation; the correction of faulty application of principles, and the stimulation to better efforts in the light of better information.

The part thus assigned to the class-room can be performed with equal worth by the correspondence system, and the only proviso for the largest success is in the regular, systematic, daily devotion to study of a fixed portion of time, and such a student, though he may never look into his teacher's face, may become in the lines which he has chosen as successful and eminent as his more fortunate neighbor, whose privilege it may be to sit day by day in the presence of the same teacher in his distant college class-room. The means by which this correspondence and inter-communication is to be accomplished is the central office of the University at Plainfield, N. J. Students desiring to avail themselves of its privileges, upon the simple stating of the fact by letter addressed to The Chautauqua University, will receive full details of the courses of study, the books required, the essential particulars of the workings of the institution, and all information necessary to matriculation. When the student has been once fully entered in the University course he is put into communication with one or more professors, for the beginning of his work. From that time his progress will depend solely upon the nature of his own efforts. The department professor will furnish directions for study, with instructions how to use the required books, outline

memoranda which shall be filled and returned to the professor, and lesson papers for occasional and free interchange, by which an exact record of progress can be obtained.

The office of the University will be in charge of a registrar, part of whose duty shall be to keep an accurate knowledge of the advancement and proficiency of each student, to develop the university spirit among the students, and to bring the different departments into harmonious and concurrent relations.

What we have written will, of necessity, come under the eye of every member of the Chautauqua Literary and Scientific

Circle. To each of you we appeal. Give to this preliminary statement as wide a currency as possible. Representatives of the classes we have described are in every community where the C. L. S. C. exists. Bring this article to the notice of such. Let the Chautauqua spirit, to which you are debtor, through you be communicated to those around you, and thereby aid in the work of a broader and better culture for the nation.

R. S. HOLMES,

Registrar Chautauqua University.

PLAINFIELD, N. J., September, 1884.

BOOKS RECEIVED.

Anatomy, Physiology, and Hygiene: A Manual for the use of Colleges, Schools, and General Readers. By Jerome Walker, M. D. New York: A. Lovell & Co. 1884.

Practical Work in the School Room. Part I. A Transcript of the Object Lessons on the Human Body Given in Primary Department, Grammar School No. 49, New York City. New York: A. Lovell & Co. 1884.

Harry's Vacation; or, Philosophy at Home. By William C. Richards, A. M. New York: D. Appleton & Co. 1884.

Essentials of English for Schools, Colleges, and Private Study. By Alfred H. Welsh, A. M. Chicago: L. C. Griggs & Co. 1884.

Stories by American Authors. Vol. V. New York: Charles Scribner's Sons. 1884.

Echoes from the Valley. By Rob Roy McGregor Parrish. Portland, Oregon. Geo. H. Himes, Printer and Publisher. 1883.

Cookery for Beginners. A Series of Familiar Lessons for Young Housekeepers. By Marion Harland. Boston: D. Lothrop & Co.

A Golden Inheritance. By Reese Rockwell. New York: Phillips & Hunt. 1884.

A Dictionary of Miracles. Imitative, Realistic, and Dogmatic. By the Rev. E. Cobham Brewer, LL.D. Philadelphia: J. B. Lippincott & Co. 1884.

Which: Right or Wrong? By M. L. Moreland. Boston: Lee & Shepard, Publishers. 1883.

A Mother's Souvenir. By Mrs. H. W. T. Sayers. Indianapolis: Wm. B. Burford. 1884.

The King's Men. A Tale of To-morrow. By Robert Grant, John Boyle O'Reilly, J. S. of Dale, and John T. Wheelwright. New York: Charles Scribner's Sons. 1884.

College Greek Course in English. By William Cleaver Wilkinson. New York: Phillips & Hunt. Cincinnati: Cranston & Stowe. 1884.

Spiritual Life; Its Nature, Urgency, and Crowning Excellence. By Rev. J. H. Potts, A. M. New York: Phillips & Hunt. Cincinnati: Cranston & Stowe. 1884.

Christina; or, The Persecuted Family. A Tale of Sorrow and Suffering. By Rev. J. Dillon. New York: Phillips & Hunt. Cincinnati: Cranston & Stowe. 1884.

One Little Rebel. By Julia B. Smith. New York: Phillips & Hunt. Cincinnati: Cranston & Stowe. 1884.

Centenary Thoughts for the Pew and Pulpit of Methodism, in Eighteen Hundred and Eighty-four. By R. S. Foster, one of the Bishops of the M. E. Church. New York: Phillips & Hunt. Cincinnati: Cranston & Stowe. 1884.

Queer Stories for Boys and Girls. By Edward Eggleston. New York: Charles Scribner's Sons. 1884.

SPECIAL NOTES.

All business correspondence relating to Chautauqua or the Hotel Athenæum should be addressed to W. A. Duncan, Syracuse, N. Y.

Members of the C. L. S. C. should remember that Appleton's "Chemistry," published by the Providence Lithograph Company is the one used in the Required Readings for 1884-85. Appleton's "Young Chemist" can not be substituted for it.

One favor is granted by Professor Hall, of the department of microscopy in the Chautauqua University, to the twenty circles of the C. L. S. C. who make early applications. He will give instruction in microscopy, and will loan twenty boxes, six slides each, of specimens, the circles to procure a thirty dollar instrument, such as he has recommended, and to pay the postage on the slides both ways.

The C. L. S. C. of the New England Assembly have decided to erect a hall on the hill at the New England Assembly, South Framingham, Mass., corresponding to the Hall of Philosophy at Chautauqua. New England members who desire to contribute to this most worthy enterprise should send their subscriptions to Rev. Webster Woodbury, Foxboro, Mass.; Rev. William Full, South Framingham, Mass.; Rev. M. H. A.

Evans, Leominster, Mass.; Rev. George E. Lovejoy, Franklin, Mass.; Rev. B. F. Fullerton, Hopkinton, Mass.; Dr. E. M. White, Boston, Mass.; Rev. N. B. Fisk, Woburn, Mass. Send subscriptions to any member of the committee, but send the cash to the treasurer, Rev. N. B. Fisk, Woburn, Mass.

Question.—Do undergraduate members of the C. L. S. C. have to pay an extra fee for the White Seal in connection with each year of the regular course? *Answer.*—No.

Dr. W. C. Wilkinson writes us to state to members of the C. L. S. C. that the whole of pages 168, 169, of "Preparatory Latin Course in English," condemning Plutarch of carelessness are hereby expunged. The necessary correction will be made in future editions of the book.

Presidents or secretaries of local circles in Canada are particularly requested to send to Lewis C. Peake, drawer 2559, Toronto, Canada, the name and location of their circle, names of officers, number of members, times of meeting, and any other matters of interest concerning the work of the circle. He will be glad to furnish any quantity of circulars, forms of application for membership, and general information. Now is the time for a grand missionary effort all along the line, and local circles and individual members must lead the way.

POPULAR EDUCATION.

CHAUTAUQUA LITERARY AND SCIENTIFIC CIRCLE.

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 Counselors—Lyman Abbott, D.D.; J. M. Gibson, D.D.; Bishop H. W. Warren, D.D.; W. C. Wilkinson, D.D.
 Office Secretary—Miss Kate F. Kimball.
 General Secretary—A. M. Martin.

THE C. L. S. C.

The Chautauqua Literary and Scientific Circle is a school at home—a school after school—a college for one's own house, by which he may become acquainted in a general way with the school and college world, into which so many of our young people go, about which their parents know so little, and the benefits of which college people themselves need to recall in their later years.

It is for busy people, who left school years ago, and who desire to pursue some systematic course of instruction.

It is for high school and college graduates, for people who never entered either high school or college, for merchants, mechanics, apprentices; mothers, busy housekeepers, farmer boys, shop girls, and for people of leisure and wealth who do not know what to do with their time. College graduates, ministers, lawyers, physicians, accomplished ladies, are taking the course. They find the required books entertaining and useful, giving them a pleasant review of studies long ago laid aside. Several of our members are over eighty years of age. Very few are under eighteen.

The C. L. S. C. Course requires about forty minutes' time a day for the term of four years. It need not be done every day, although this is a desirable way to carry on the work. The readings are comprehensive, clear, simple, and entertaining. They vary, of course, in interest according to the taste of the reader.

More than sixty thousand names are enrolled in this so-called "People's University." Although not a University at all, it has put educational influence, atmosphere and ambition into the homes of the people, which will lead many thousands of youth to seek the education which colleges and universities supply.

It is an easy thing to join the C. L. S. C. No preliminary examination is required; indeed, no examination is required at any time. Members are expected to fill out certain simple memoranda year after year, and forward them to the central office of the C. L. S. C., at Plainfield, N. J. But this is no task at all. A careful reading of the books is all that is necessary in order to graduate.

The following is the distribution of the subjects and books of the regular course through the year:

October.

Brief History of Greece. (Barnes.)
 Preparatory Greek Course in English.
 Chautauqua Text-Book, No. 5. Greek History.

In THE CHAUTAUQUAN:

"Glimpses of Ancient Greek Life."
 "Greek Mythology."
 "The Temperance Teachings of Science."
 "Studies in Kitchen Science and Art."
 "Sunday Readings."
 Our Alma Mater—"Lessons in Every-Day Speech."

November.

Preparatory Greek Course in English. (Continued.)

Art of Speech. Vol. I.

In THE CHAUTAUQUAN:

"Glimpses of Ancient Greek Life."
 "Greek Mythology."
 "The Temperance Teachings of Science."
 "Sunday Readings."

December.

Preparatory Greek Course in English. (Concluded.)

Cyrus and Alexander.

In THE CHAUTAUQUAN:

"Glimpses of Ancient Greek Life."
 "Greek Mythology."
 "The Temperance Teachings of Science."
 "Sunday Readings."
 Our Alma Mater—"Lessons in Every-Day Speech."

January.

College Greek Course in English. The Character of Jesus. (Bushnell.)

In THE CHAUTAUQUAN:

"Glimpses of Ancient Greek Life."
 "Greek Mythology."
 "The Temperance Teachings of Science."
 "Studies in Kitchen Science and Art."
 "Sunday Readings."

To defray the expenses of correspondence, memoranda, etc., an annual fee of fifty cents is required. This amount should be forwarded to Miss K. F. Kimball, Plainfield, N. J., by New York or Philadelphia draft, Postoffice order, or Postal note on Plainfield, N. J. Do not send postage-stamps if you can possibly avoid it.
 N. B.—In sending your fee, be sure to state to which class you belong, whether 1885, 1886, 1887, or 1888.

APPLICATION FOR MEMBERSHIP.

Persons desiring to unite with the C. L. S. C. should forward answers to the following questions to DR. J. H. VINCENT, Plainfield, N. J. The class graduating in 1888 should begin the study of the lessons required October, 1884. They may begin as late as January 1, 1889.

1. Give your name in full.
2. Your post-office address, with county and State.
3. Are you married or single?
4. What is your age? Are you between twenty and thirty, or thirty and forty, or forty and fifty, or fifty and sixty, etc.?
5. If married, how many children living under the age of sixteen years?
6. What is your occupation?
7. With what religious denomination are you connected?

Persons should be present to enjoy the annual meetings at Chautauqua, but attendance there is not necessary to graduation in the C. L. S. C. Persons who have never visited Chautauqua may enjoy the advantages, diploma, and honors of the "Circle." The *Daily Assembly Herald* is published on the grounds during the Chautauqua Assembly. Send it for the *Daily Herald* to T. L. Flood, Meadville, Pa.

* We ask this question to ascertain the possible future intellectual and moral influence of this "Circle" on your homes.

February.

College Greek Course in English. Beginner's Hand-Book of Chemistry.

How to Help the Poor.

In THE CHAUTAUQUAN:

"The Circle of the Sciences."
 "Huxley on Science."
 "Home Studies in Chemistry."
 "Sunday Readings."
 Our Alma Mater—"Lessons in Household Decoration."

March.

College Greek Course in English. (Concluded.)

Beginner's Hand-Book of Chemistry.

In THE CHAUTAUQUAN:

"The Circle of the Sciences."
 "Home Studies in Chemistry."
 "Talks About Good English."
 "Sunday Readings."

April.

Hurst's History of the Reformation. Beginner's Hand-Book of Chemistry.

In THE CHAUTAUQUAN:

"The Circle of the Sciences."
 "Home Studies in Chemistry."
 "Easy Lessons in Animal Biology."
 "Talks About Good English."
 "Studies in Kitchen Science and Art."
 "Sunday Readings."
 Our Alma Mater—"Lessons in Self-Discipline."

May.

In THE CHAUTAUQUAN:

"Easy Lessons in Animal Biology."
 "Talks About Good English."
 "Sunday Readings."

June.

In THE CHAUTAUQUAN:

"Easy Lessons in Animal Biology."
 "Talks About Good English."
 "Sunday Readings."
 Review Full Year's Course.

INITIATION FEE.

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FOR 1884-1885.

The Chautauqu Periodicals.

THE CHAUTAUQUAN.

Vol. V. 1884-1885.

The fifth volume of THE CHAUTAUQUAN begins with the present issue. The magazine has a new and improved make-up. A corps of the ablest writers in the country supply its columns. One-half of the Required Readings of the C. L. S. C. are published in its pages. The Special C. L. S. C. Departments will be more full and entertaining than ever.

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THE CHAUTAUQUA

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